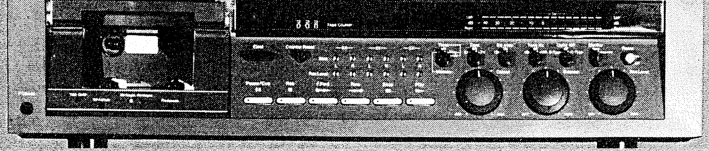
Nakamichi

Service Manual

Nakamichi 582Z

Discrete Head Cassette Deck



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1. GENERAL

1.1. Control Functions

The Nakamichi 582Z control functions are shown below:

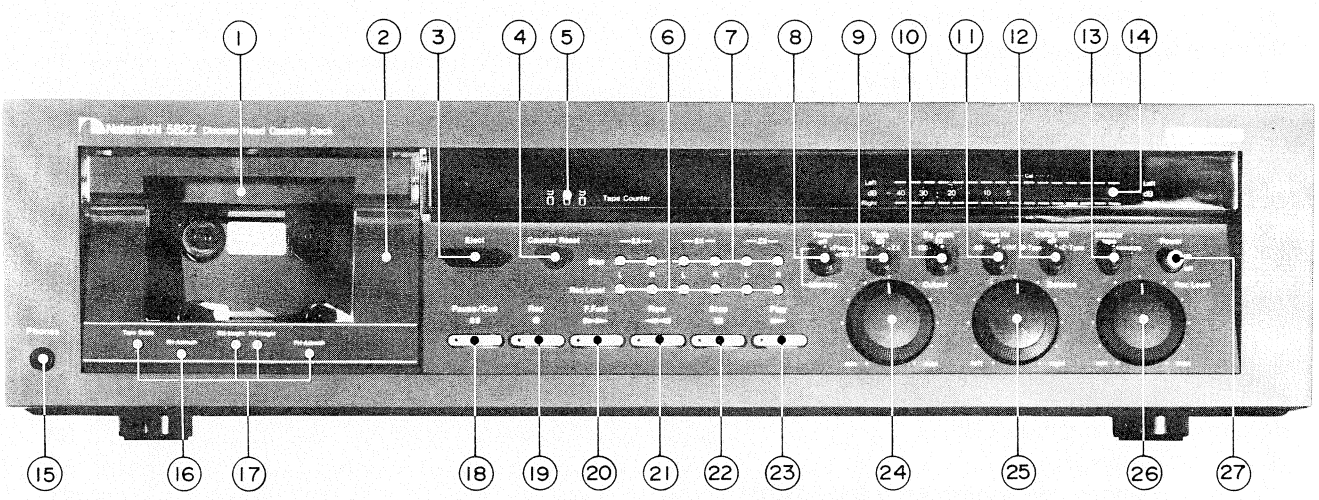


Fig. 1.1 Front View

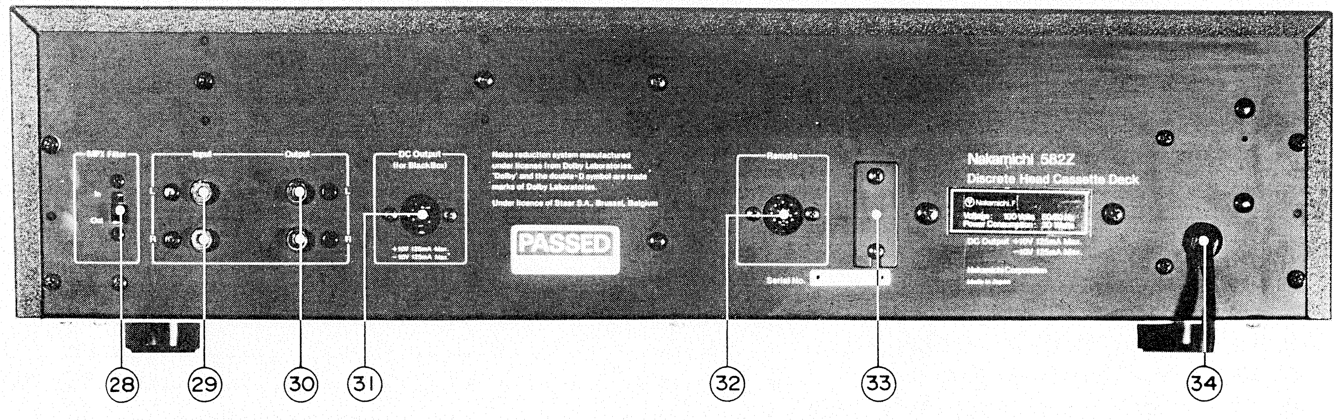


Fig. 1.2 Rear View

1. Acrylic Cassette Compartment Cover
2. Cassette Lid
3. Eject Button
4. Counter Reset Button
5. Tape Counter
6. Record Calibration Controls
7. Bias Adjustment Controls
8. Tape Start Memory/Timer Switch
9. Tape Switch
10. Eq. Switch
11. Test Tone Switch
12. Dolby NR Switch
13. Monitor Switch
14. Level Meters
15. Headphone Jack
16. Record Head Azimuth Alignment Screw
17. Head Height and Azimuth Alignment Screws
18. Pause/Cue Button
19. Record Button
20. Fast-Forward Button
21. Rewind Button
22. Stop Button
23. Play Button
24. Output Level Control
25. Balance Control
26. Input Level Control
27. Power Switch
28. MPX Filter Switch
29. Input Jacks
30. Output Jacks
31. DC Output Jack
32. Remote Control Socket
33. Voltage Selector
34. Power Cord

1.2. Voltage Selector

Voltage selector is installed on the rear panel for Other Version of the Nakamichi 582Z.
This voltage selector can select either 120 V or 220-240 V at customer's disposal.

1.3. History on Major Modifications

Serial No.:	A12101001 –	A12102102 –	A12102903 –
Dolby NR P.C.B. Ass'y	Playback Dolby NR P.C.B. Ass'y Record Dolby NR P.C.B. Ass'y	Dolby NR P.C.B. Ass'y	
Main P.C.B. Ass'y	Former Type	New Type	
Reel Motor Ass'y	Former Type		New Type
Logic P.C.B. Ass'y	Former Type		New Type

2. REMOVAL PROCEDURES

2.1. Acrylic Cassette Compartment Cover

Refer to Figs. 2.1.1 and 2.1.2.

(1) Push the Eject Button to open the Cassette Case Ass'y.

(2) Pull out F01 (Acrylic Cassette Compartment Cover) upwardly.

2.2. Top Cover Ass'y

Refer to Figs. 2.1.1 and 2.1.2.

(1) Remove F02 and F03, then disassemble F04 (Top Cover Ass'y).

2.3. Bottom Cover Ass'y

Refer to Figs 2.1.1 and 2.1.2.

(1) Remove F05, then disassemble F06 (Bottom Cover Ass'y).

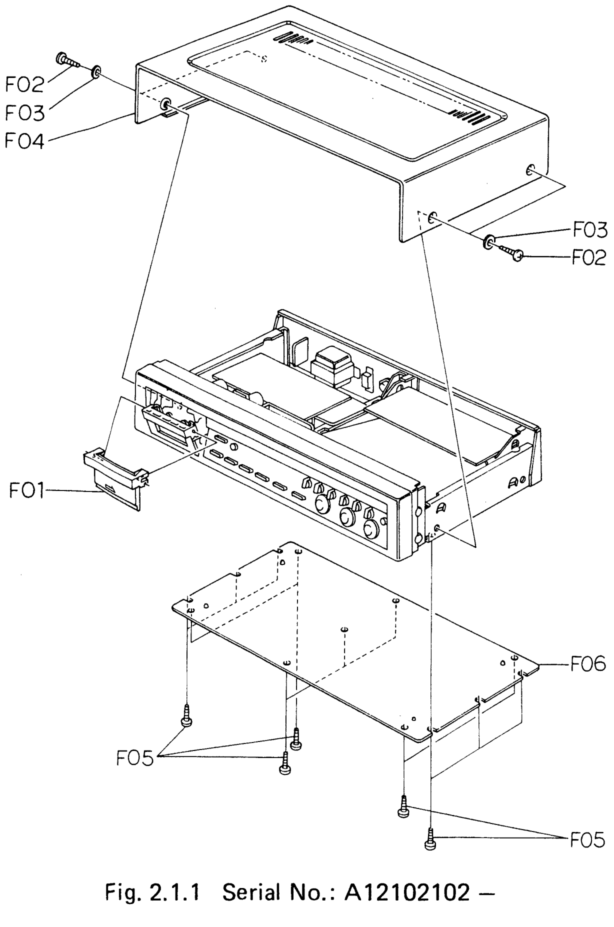


Fig. 2.1.1 Serial No.: A12102102 –

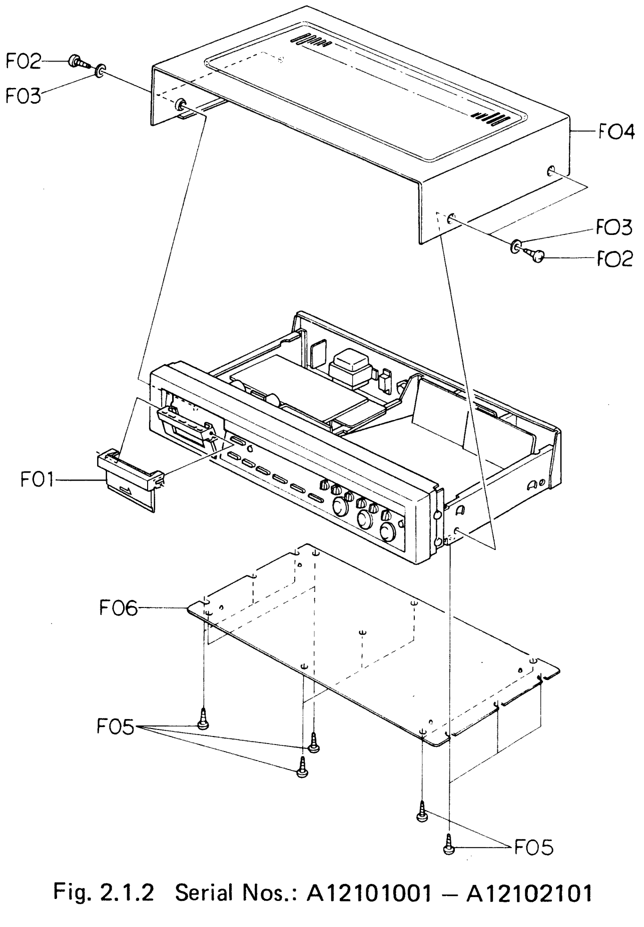


Fig. 2.1.2 Serial Nos.: A12101001 – A12102101

2.4. Front Panel Ass'y

Refer to Figs. 2.2.1 and 2.2.2.

(1) Refer to Figs. 2.1.1 and 2.1.2. Remove Top Cover Ass'y and Bottom Cover Ass'y referring to items 2.2 and 2.3.

(2) Remove F01 (Volume Knobs) by pushing with a screwdriver or similar tools from the inside of the N-582Z.

(3) Remove F02 (Switch Knobs) and F03, then disassemble F04 (Front Panel Ass'y including 2 connectors).

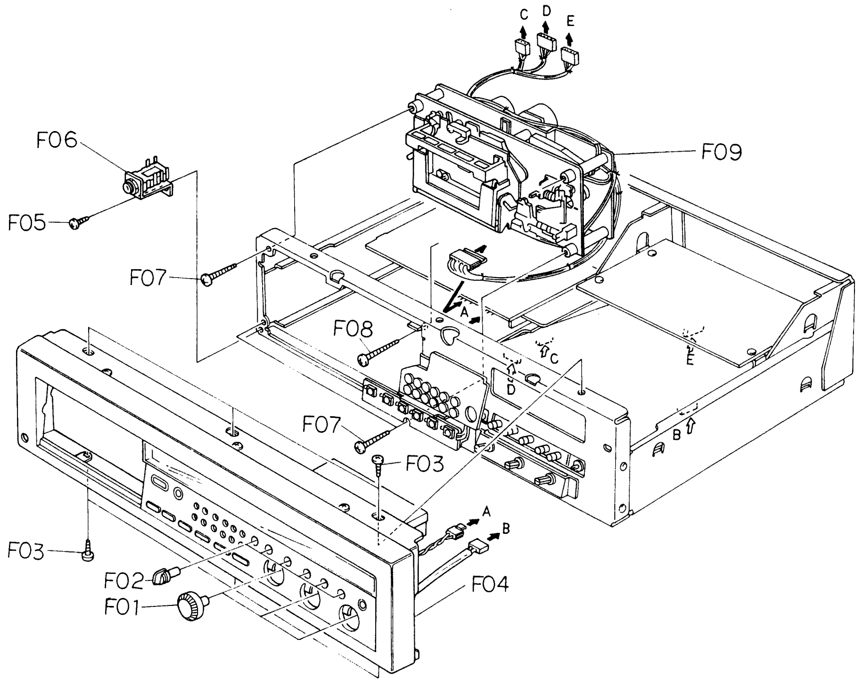
2.5. Mechanism Ass'y

Refer to Figs. 2.2.1 and 2.2.2.

(1) Remove Front Panel Ass'y referring to item 2.4.

(2) Remove F05, then disassemble F06 (Headphone Jack Ass'y).

(3) Remove F07 and F08, then disassemble F09 (Mechanism Ass'y including 4 connectors).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F05
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A
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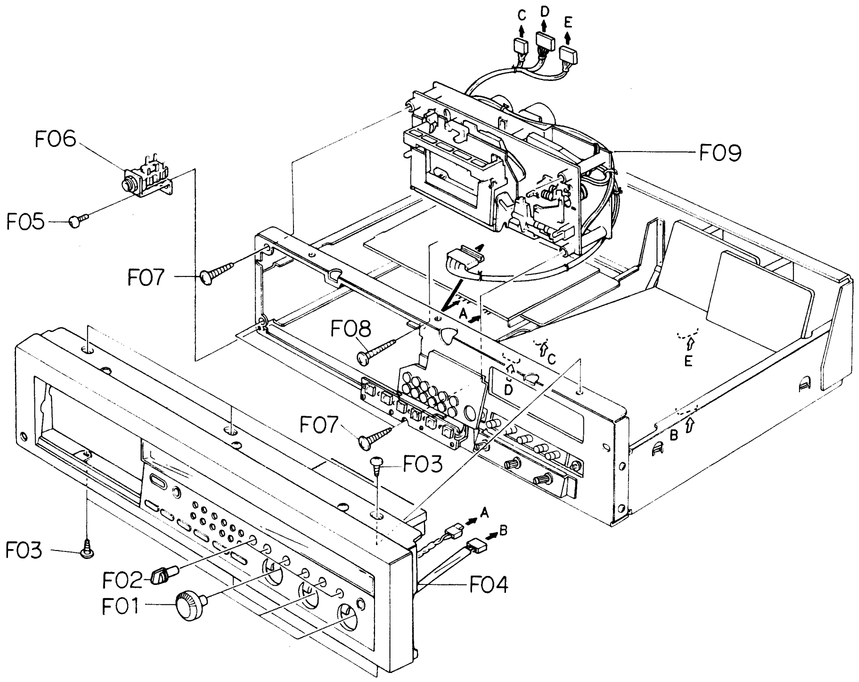
F02
F01
F04

Fig. 2.2.1 Serial No.: A12102102 –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F01
F04

Fig. 2.2.2 Serial Nos.: A12101001 – A12102101

2.6. Logic P.C.B. Ass'y

2.6.1. Serial No.: A12102102 –
Refer to Fig. 2.3.1.

(1) Refer to Fig. 2.2.1. Remove Front Panel Ass'y referring to item 2.4.
(2) Remove the connectors and wires connected by wrapping from F02 (Logic P.C.B. Ass'y).
(3) Remove F01, then disassemble F02 (Logic P.C.B. Ass'y).

2.6.2. Serial Nos.: A12101001 – A12102101
Refer to Fig. 2.3.2.

(1) Refer to Fig. 2.2.2. Remove Front Panel Ass'y referring to item 2.4.
(2) Remove the connectors and wires connected by wrapping from F02 (Logic P.C.B. Ass'y).
(3) Remove F01, then disassemble F02 (Logic P.C.B. Ass'y).

2.7. Dolby NR P.C.B. Ass'y

2.7.1. Serial No.: A12102102 –
Refer to Fig. 2.3.1.

(1) Refer to Fig. 2.1.1. Remove Front Panel Ass'y referring to item 2.4.
(2) Remove F03, then disassemble F04 (Dolby NR P.C.B. Ass'y).

2.7.2. Serial Nos.: A12101001 – A12102101
Refer to Fig. 2.3.2.

(1) Refer to Fig. 2.1.2. Remove Front Panel Ass'y referring to item 2.4.
(2) Remove F03, then disassemble F04 (Playback Dolby NR P.C.B. Ass'y).
(3) Remove F05, then disassemble F06 (Record Dolby NR P.C.B. Ass'y).

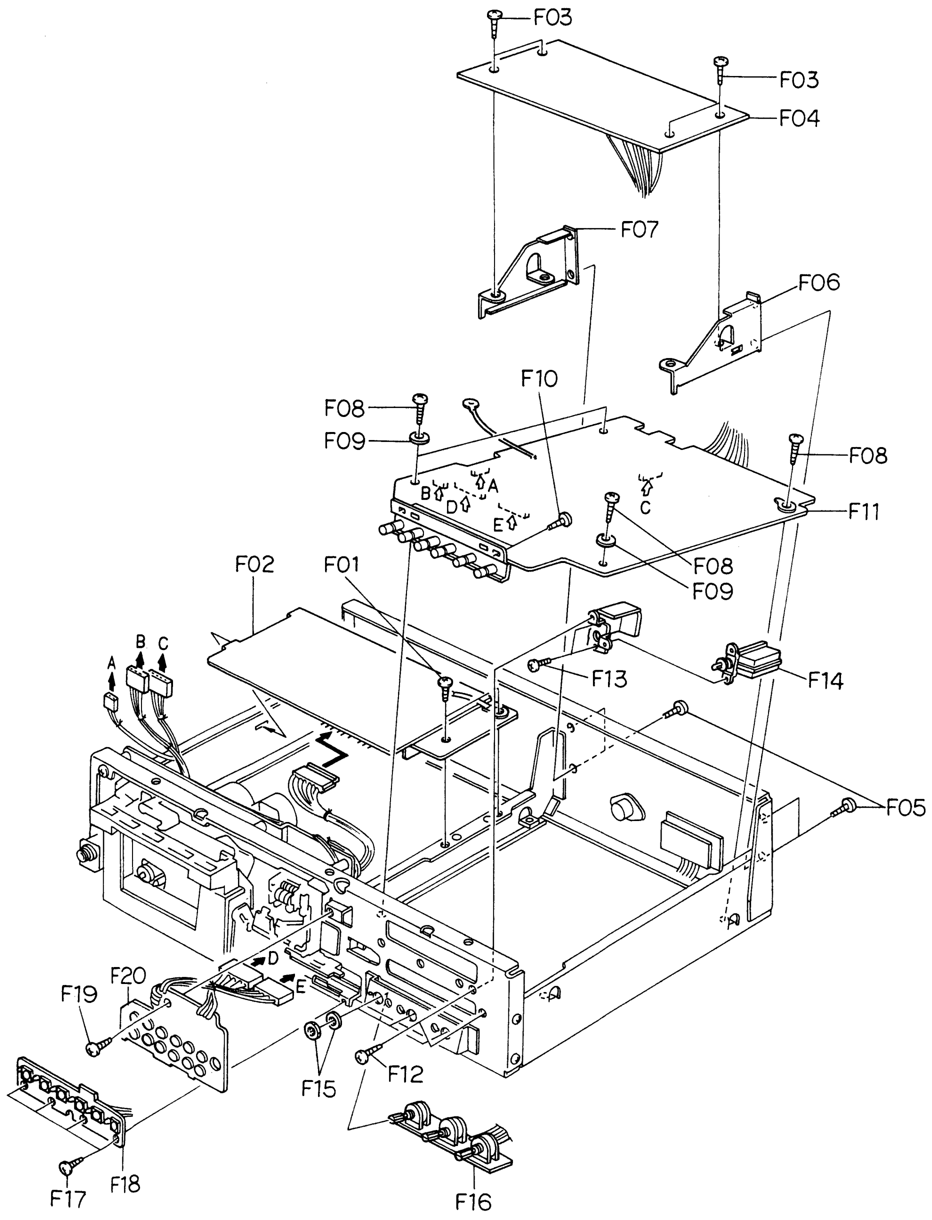

Fig. 2.3.1 Serial No.: A12102102 –

2.8. Main P.C.B. Ass'y

2.8.1. Serial No.: A12102102 –
Refer to Fig. 2.3.1.

(1) Refer to Fig. 2.2.1. Remove Front Panel Ass'y referring to item 2.4.
(2) Remove the flat cable, connectors and wires connected by wrapping from F11 (Main P.C.B. Ass'y).
(3) Remove F05, F06 (Dolby NR P.C.B. Holder D), F07 (Dolby NR P.C.B. Holder E), F08, F09 and F10, then disassemble F11 (Main P.C.B. Ass'y).

2.8.2. Serial Nos.: A12101001 – A12102101
Refer to Fig. 2.3.2.

(1) Refer to Fig. 2.2.2. Remove Front Panel Ass'y referring to item 2.4.
(2) Remove the flat cable, connectors and wires connected by wrapping from F10 (Main P.C.B. Ass'y).
(3) Remove F07, F08 and F09, then disassemble F10 (Main P.C.B. Ass'y).

2.9. Power Switch

2.9.1. Serial No.: A12102102 –
Refer to Fig. 2.3.1.

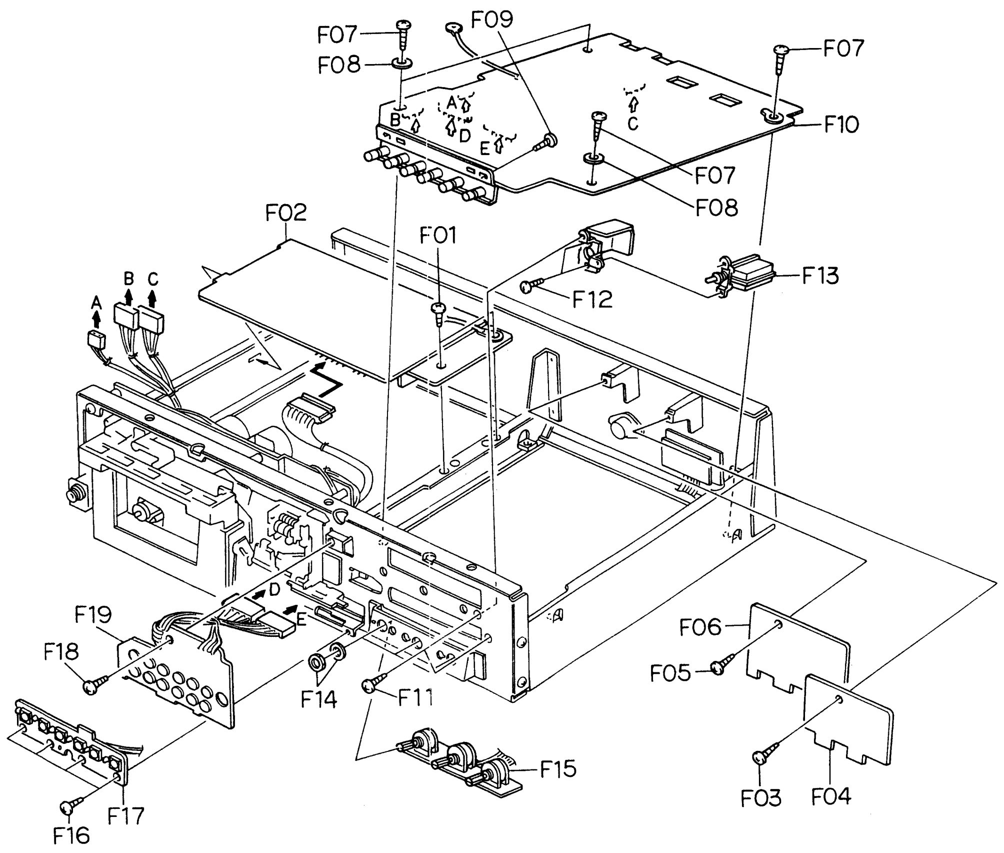

Fig. 2.3.2 Serial Nos.: A12101001 – A12102101

(1) Remove Main P.C.B. Ass'y referring to item 2.8.1.
(2) Remove F12 and F13, then disassemble F14 (Power Switch).

2.9.2. Serial Nos.: A12101001 – A12102101
Refer to Fig. 2.3.2.

(1) Remove Main P.C.B. Ass'y referring to item 2.8.2.
(2) Remove F11 and F12, then disassemble F13 (Power Switch).

2.10. Volume P.C.B. Ass'y

2.10.1. Serial No.: A12102102 –
Refer to Fig. 2.3.1.

(1) Refer to Fig. 2.2.1. Remove Front Panel Ass'y referring to item 2.4.
(2) Remove F15, then disassemble F16 (Volume P.C.B. Ass'y).

2.10.2. Serial Nos.: A12101001 – A12102101
Refer to Fig. 2.3.2.

(1) Refer to Fig. 2.2.2. Remove Front Panel Ass'y referring to item 2.4.
(2) Remove F14, then disassemble F15 (Volume P.C.B. Ass'y).

2.11. Control Button Ass'y

2.11.1. Serial No.: A12102102 –
Refer to Fig. 2.3.1.

(1) Refer to Fig. 2.2.1. Remove Front Panel Ass'y referring to item 2.4.
(2) Remove F17, then disassemble F18 (Control Button Ass'y).

2.11.2. Serial Nos.: A12101001 – A12102101
Refer to Fig. 2.3.2.

(1) Refer to Fig. 2.2.2. Remove Front Panel Ass'y referring to item 2.4.
(2) Remove F16, then disassemble F17 (Control Button Ass'y).

2.12. Record Cal. P.C.B. Ass'y

2.12.1. Serial No.: A12102102 –
Refer to Fig. 2.3.1.

(1) Refer to Fig. 2.2.1. Remove Front Panel Ass'y referring to item 2.4.
(2) Remove F19, then disassemble F20 (Record Cal. P.C.B. Ass'y).

2.12.2. Serial Nos.: A12101001 – A12102101
Refer to Fig. 2.3.2.

(1) Refer to Fig. 2.2.2. Remove Front Panel Ass'y referring to item 2.4.
(2) Remove F18, then disassemble F19 (Record Cal. P.C.B. Ass'y).

2.13. LED Level Indicator Ass'y and Indicator P.C.B. Ass'y

Refer to Fig. 2.4.

(1) Refer to Figs. 2.2.1 and 2.2.2. Remove Front Panel Ass'y referring to item 2.4.
(2) Remove F01, F02 and F03, then disassemble F04 (LED Level Indicator Ass'y).
(3) Remove F05, then disassemble F06 (Shield Cover).
(4) Remove F07, then disassemble F08 (Shield Case).
(5) Remove F09 and F10, then disassemble F11 (Indicator P.C.B. Ass'y).
(6) Remove F12, then disassemble F13 (Indicator P.C.B. Holder).

2.14. Lamp P.C.B. Ass'y

Refer to Fig. 2.4.

(1) Remove LED Level Indicator Ass'y referring to item 2.13.
(2) Remove F14, then disassemble F15 (Lamp House Cover Ass'y).
(3) Remove F16, then disassemble F17 (Lamp P.C.B. Ass'y).

2.15. Aluminum Mirror

Refer to Fig. 2.4.

(1) Remove Lamp House Cover Ass'y referring to item 2.14.
(2) Remove F18, then disassemble F19 (Aluminum Mirror).

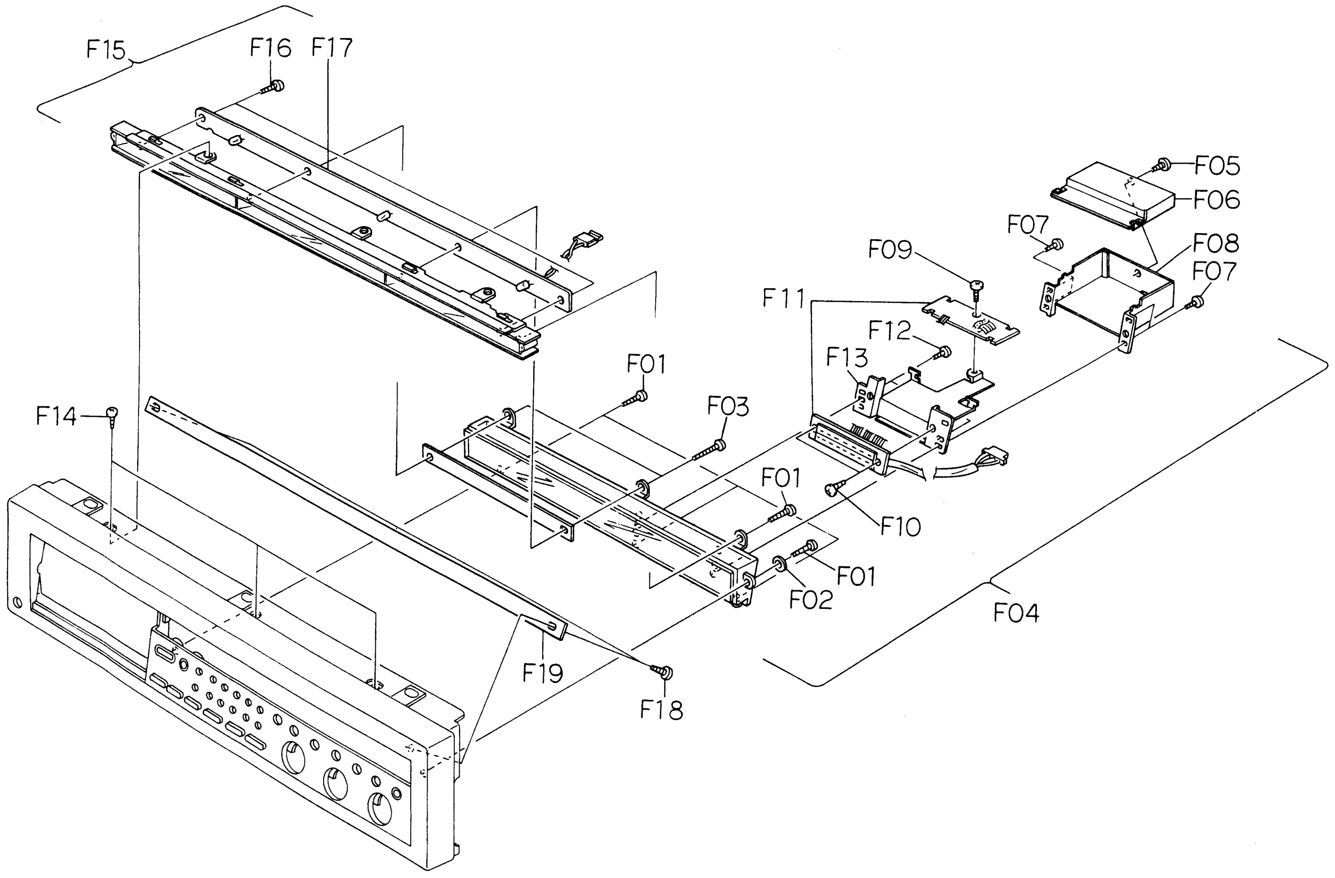
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Fig. 2.4

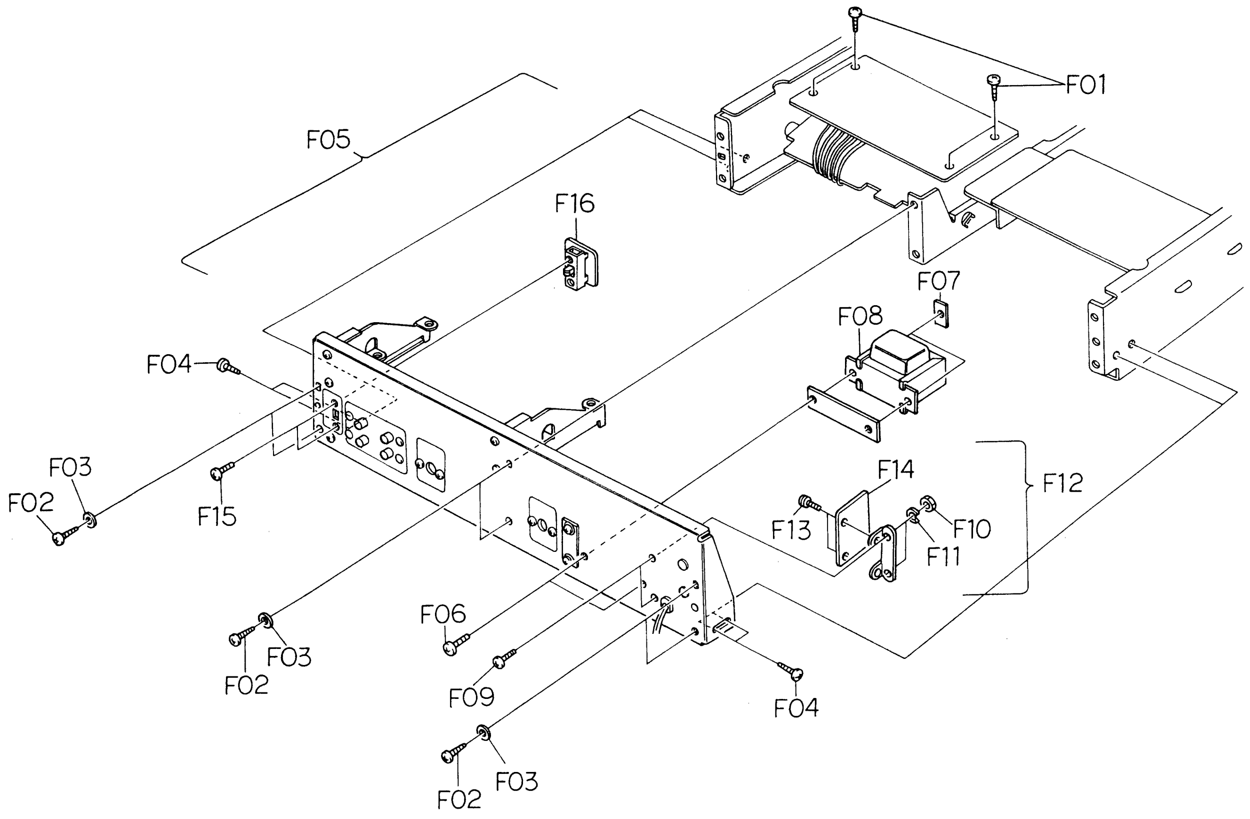
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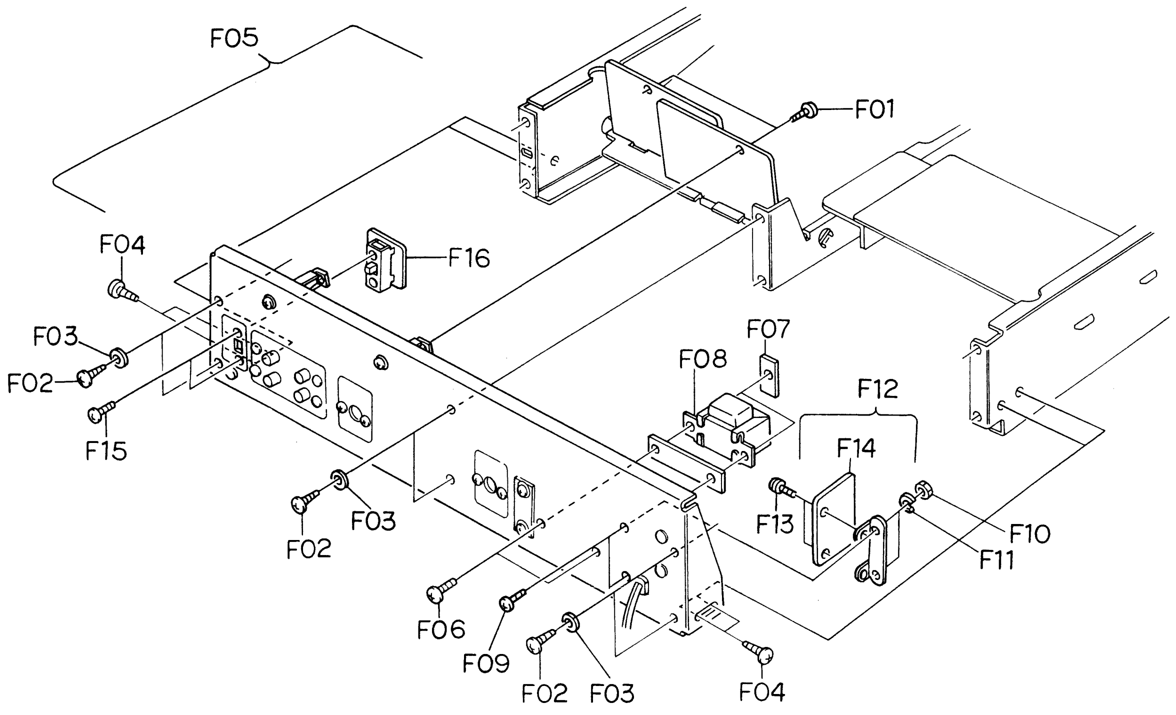
Fig. 2.5.1 Serial No.: A12102102 –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F04

Fig. 2.5.2 Serial Nos.: A12101001 – A12102101

2.16. Rear Panel Ass'y

Refer to Figs. 2.5.1 and 2.5.2.

(1) Refer to Figs. 2.1.1 and 2.1.2. Remove Top Cover Ass'y and Bottom Cover Ass'y referring to items 2.2 and 2.3.

(2) Remove F01, F02, F03 and F04, then disassemble F05 (Rear Panel Ass'y).

2.17. Power Transformer

Refer to Figs. 2.5.1 and 2.5.2.

(1) Refer to Figs. 2.1.1 and 2.1.2. Remove Top Cover Ass'y and Bottom Cover Ass'y referring to items 2.2 and 2.3.

(2) Remove F06 and F07, then disassemble F08 (Power Transformer).

2.18. Mains P.C.B. Ass'y

Refer to Figs. 2.5.1 and 2.5.2.

(1) Refer to Figs. 2.1.1 and 2.1.2. Remove Top Cover Ass'y referring to item 2.2.

(2) Remove F09, F10 and F11, then disassemble F12 (Mains P.C.B. Ass'y).

(3) Remove F13, then disassemble F14 (Mains P.C.B.).

2.19. MPX Filter Switch P.C.B. Ass'y

Refer to Figs. 2.5.1 and 2.5.2.

(1) Refer to Figs. 2.1.1 and 2.1.2. Remove Top Cover Ass'y referring to item 2.2.

(2) Remove F15, then disassemble F16 (MPX Filter Switch P.C.B. Ass'y).

2.20. Cassette Case Ass'y

Refer to Fig. 2.6.

(1) Refer to Figs. 2.2.1 and 2.2.2. Remove Mechanism Ass'y referring to item 2.5.

(2) Push the Eject Button to open the Cassette Case Ass'y.

(3) Remove F01, then disassemble the piston of the Air Damper Ass'y.

(4) Remove F02 and F03, then disassemble F04 (Cassette Case Ass'y).

2.21. Cover Plate

Refer to Fig. 2.6.

(1) Refer to Figs. 2.2.1 and 2.2.2. Remove Front Panel Ass'y referring to item 2.4.

(2) Push the Eject Button to open the Cassette Case Ass'y.

(3) Remove F05, then disassemble F06 (Cover Plate).

2.22. Tape Counter Ass'y

Refer to Fig. 2.6.

(1) Refer to Figs. 2.2.1 and 2.2.2. Remove Front Panel Ass'y referring to item 2.4.

(2) Remove F07, then disassemble F08 (Tape Counter Ass'y).

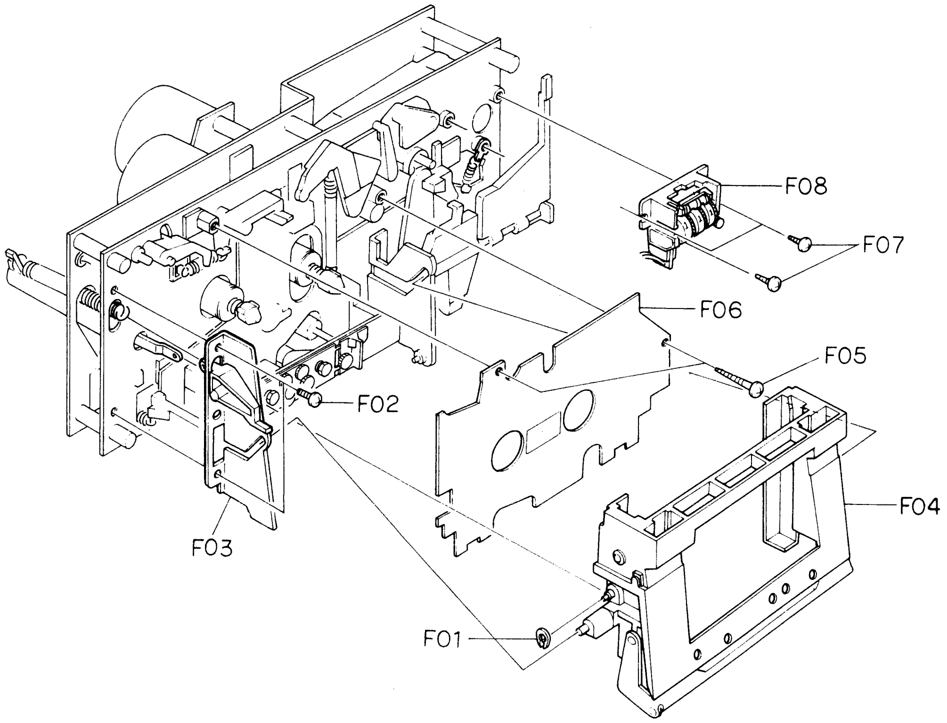


Fig. 2.6

2.23. Capstan Motor Ass'y and Flywheel Ass'y

Refer to Fig. 2.7.

(1) Refer to Figs. 2.2.1 and 2.2.2. Remove Mechanism Ass'y referring to item 2.5.
(2) Remove F01 and F02, then disassemble F03 (Flywheel Holder Ass'y) and F06 (Capstan Belt).
(3) Remove F04, then disassemble F05 (Capstan Motor Ass'y).
(4) Remove F07 (Supply Flywheel Ass'y), then disassemble F08 (Take-up Flywheel Ass'y).
(5) After removing both Flywheel Assemblies, disassemble F09 (Thrust Washer 3.1 mm), F10 (Thrust Washer 2.6 mm), F11 (Flange Thrust Caps) and F12 (Flywheel Thrust Springs).

2.24. Sub Mechanism Chassis Ass'y

Refer to Fig. 2.8.

(1) Refer to Figs. 2.2.1 and 2.2.2. Remove Mechanism Ass'y referring to item 2.5.
(2) Remove Flywheel Holder Ass'y and both Flywheel Assemblies referring to above item 2.23.
(3) Remove F01 and F02, then disassemble F03 (Sub Mechanism Chassis Ass'y).

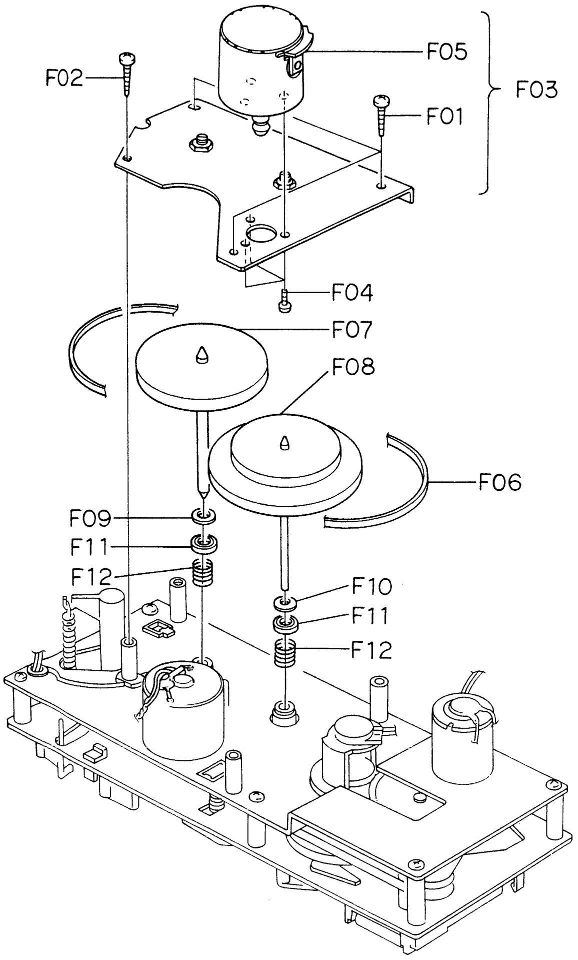


Fig. 2.7

2.25. Control Motor Ass'y

Refer to Fig. 2.8.

(1) Remove Sub Mechanism Chassis Ass'y referring to item 2.24.
(2) Remove F04, then disassemble F05 (Control Motor Ass'y).

2.26. Reel Motor Ass'y

Refer to Fig. 2.8.

(1) Remove Sub Mechanism Chassis Ass'y referring to item 2.24.
(2) Remove F06, then disassemble F07 (Reel Motor Ass'y).

2.27. Cam Control Volume

Refer to Fig. 2.8.

(1) Remove Sub Mechanism Chassis Ass'y referring to item 2.24.
(2) Remove F08, then disassemble F09 (Volume Coupler).
(3) Remove F10, then disassemble F11 (Cam Control Volume).

2.28. Reel Hub Ass'y

Refer to Fig. 2.8.

(1) Remove Sub Mechanism Chassis Ass'y referring to item 2.24.
(2) Remove F12 (Reel Hub Heads).
(3) Remove F13 (Reel Hub B Assemblies).
(4) Remove F14 (Reel Hub Take-up Ass'y) and F15 (Reel Hub Supply Ass'y).
(5) Remove F16 (Back Tension Felt) and F17 (Back Tension Spring) from the supply side Reel Hub Ass'y.

2.29. Idler Ass'y

Refer to Fig. 2.8.

(1) Remove Sub Mechanism Chassis Ass'y referring to item 2.24.
(2) Remove F18, then disassemble F19 (Idler Ass'y).

2.30. Cam Drive Gear and Cam

Refer to Fig. 2.8.

(1) Remove Sub Mechanism Chassis Ass'y referring to item 2.24.
(2) Remove F20, then disassemble F21 (Cam Drive Gear).
(3) Remove F22, then disassemble F23 (Counter-Load Arm Ass'y).
(4) Remove F24, then disassemble F25 (Cam).

2.31. Head Mount Base Ass'y

Refer to Fig. 2.9.

(1) Refer to Fig. 2.6. Remove Cassette Case Ass'y referring to item 2.20.
(2) Remove F01, then disassemble F02 (Head Mount Base Ass'y).

2.32. Supply Pressure Roller Ass'y

Refer to Fig. 2.9.

(1) Remove Head Mount Base Ass'y referring to item 2.31.

(2) Remove F03 and a washer, then disassemble F04 (Supply Pressure Roller Ass'y).

2.33. Erase Head

Refer to Fig. 2.9.

(1) Remove Head Mount Base Ass'y referring to item 2.31.

(2) Remove F05, then disassemble F06 (Erase Head).

2.34. Take-up Pressure Roller Ass'y

Refer to Fig. 2.9.

(1) Remove Head Mount Base Ass'y referring to item 2.31.

(2) Remove F07 and a washer, then F08 (Take-up Pressure Roller Ass'y).

2.35. Playback Head Ass'y

Refer to Fig. 2.9.

(1) Remove Head Mount Base Ass'y referring to item 2.31.

(2) Turn F09 by 90° by pushing it, then disassemble F10 (Playback Head Ass'y).

2.36. Record Head Ass'y

Refer to Fig. 2.9.

(1) Remove Head Mount Base Ass'y referring to item 2.31.

(2) Turn F11 by 90° by pushing it, then disassemble F12 (Record Head Ass'y).

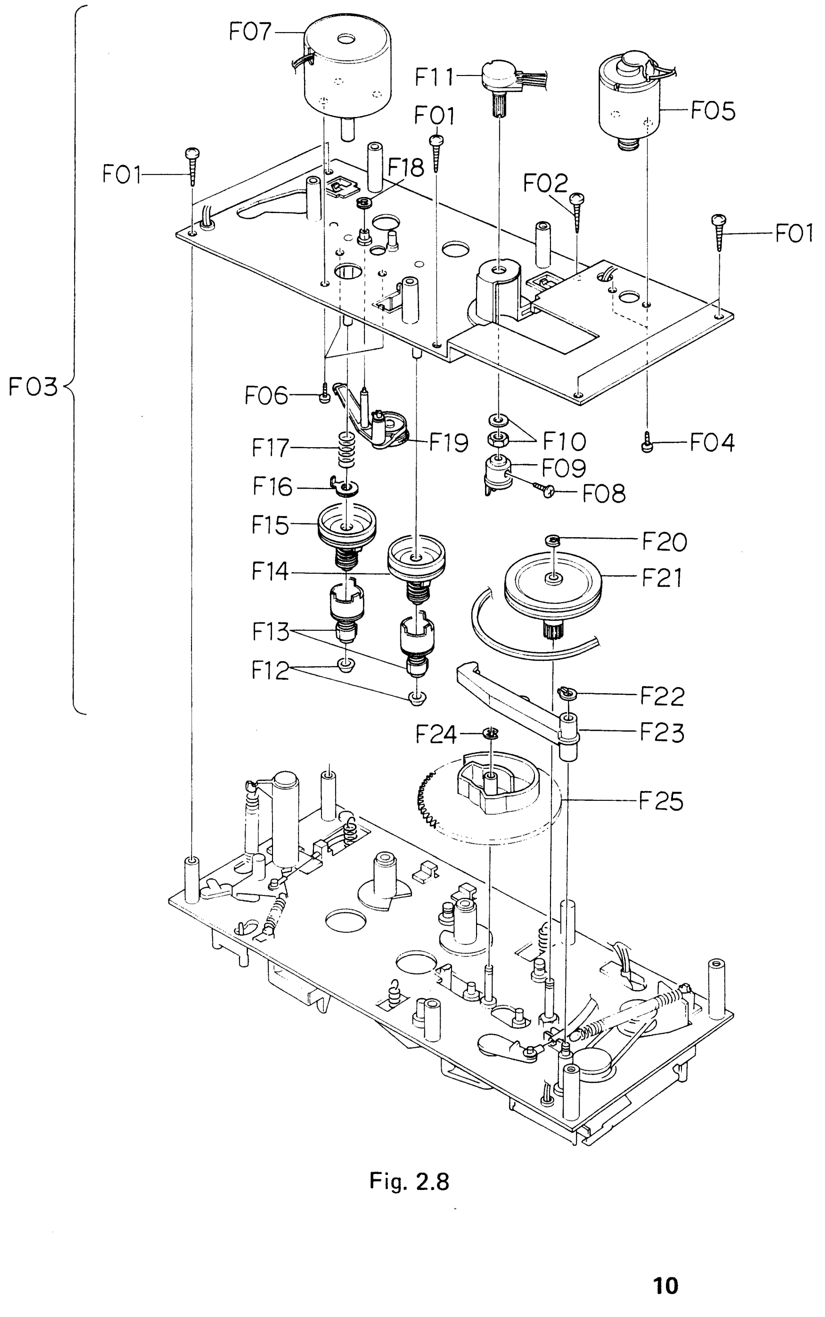

F07
F11
F01
F05
F01
F18
F02
F01
F03
F06
F17
F19
F10
F04
F09
F16
F08
F15
F20
F14
F21
F13
F12
F22
F24
F23
F25

Fig. 2.8

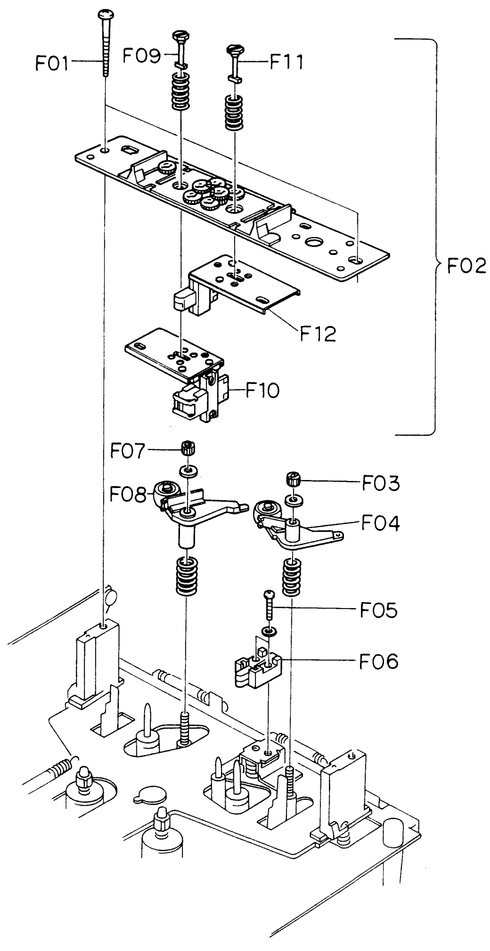

F01
F09
F11
F02
F12
F10
F07
F03
F08
F04
F05
F06

Fig. 2.9

3. MEASUREMENT INSTRUMENTS

(1) Audio Generator (20 Hz – 200 kHz)
(2) AC Millivolt Meter (with dB measures)
(3) Oscilloscope (DC – 5 MHz)
(4) Distortion Meter
(5) Speed & Wow/Flutter Meter
(6) Frequency Counter (DC – 10 MHz)
(7) Ohm Meter
(8) DC Volt Meter
(9) AC Volt Meter
(10) Torque Gauge (DA09013A)
(11) 15 kHz Azimuth Tape (DA09004A)
(12) 3 kHz Speed & Wow/Flutter Tape (DA09006A)
(13) 1 kHz Track Alignment Tape (DA09007A)
(14) 400 Hz Level Tape (DA09005A)
(15) 20 kHz PB Frequency Response Tape (DA09001A)
(16) 15 kHz PB Frequency Response Tape (DA09002A)
(17) 10 kHz PB Frequency Response Tape (DA09003A)
(18) Reference EXII Tape (DA09066A)
(19) Reference SX Tape (DA09025A)
(20) Reference ZX Tape (DA09037A)
(21) Tilt Check Gauge M-9039 (DA09039A)
(22) EH Tilt Check Gauge M-9040 (DA09040A)
(23) EH Stroke Check Gauge M-9051 (DA09051A)
(24) Stroke Check Gauge M-9047 (DA09047B)
(25) Record Head Mounting Gauge M-9048 (DA09048A)
(26) Back Tension Gauge (DA09055A)
(27) Tension Arm Adjustment Cassette (DA09056A)
(28) Audio Analyzer T-100
(including Distortion, Wow/Flutter, Speed, Oscillator and dB meters)

Note: (10) – (28) are the products of Nakamichi Corporation.

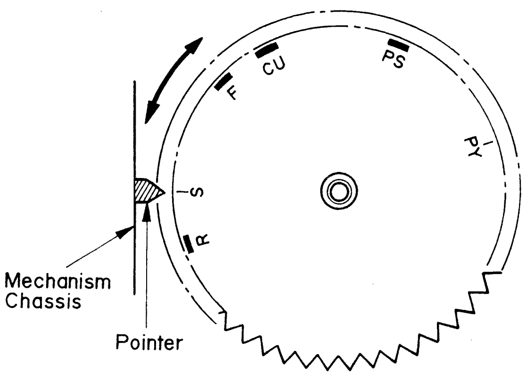


Fig. 4.1

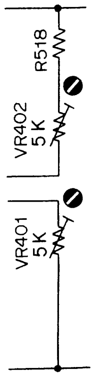


Fig. 4.2

4. MECHANICAL ADJUSTMENTS

4.1. Mechanism Control Cam Adjustment

Before adjustment, disassemble the Front Panel Ass'y then remove the Cover Plate, referring to items 2.4 and 2.21.

(1) Offset Adjustment of Control Motor Driver

(a) Refer to Figs. 4.1 and 4.2.
Adjust VR402 and VR401 on the Logic P.C.B. Ass'y to locate approximately at the middle of the variable range. Then turn ON the Power switch.

VR402 (for Cam position stop)
VR401 (for Cam position play)

(b) Press the Stop button to set the N-582Z in Stop mode.
Adjust VR402 (for stop) so that the "S" mark on the Cam corresponds to the pointer on the mechanism chassis.

(c) Press the Play button to set the N-582Z in Playback mode.
(Cam will rotate, and the position marked with "PY" comes to the pointer.)
Adjust VR401 (for play) so that the "PY" mark on the Cam corresponds to the pointer.

(d) Repeat above (b) and (c) 2 – 3 times so that the "S" and "PY" marks on the Cam correspond to the pointer accurately in Stop and Playback modes respectively. (This adjustment is required because the position adjusted by one volume will be slightly changed when the other volume is adjusted.)

(e) Set the N-582Z in F.F., Pause, Record, or Cue mode by pressing each button (press F.F. and Pause buttons to set the N-582Z in Cue mode) and check to insure that the pointer is in a range of "F", "PS", "R", or "CU" mark respectively.

(f) If out of the range, precise adjustment for each position according to "(2) Offset Fine Adjustment of Control Motor Driver" will be required.

(2) Offset Fine Adjustment of Control Motor Driver

Adjust only if a satisfactory result is not obtained in "(1) Offset Adjustment of Control Motor Driver".
This adjustment is made by changing the value of the fixed resistors on the Logic P.C.B. Ass'y.
Note: The value of voltage is typical value.

(a) Observation Point of Reference Voltage

Observe the each voltage at the sliding contact of the Cam Control Volume VR601 (10 kΩ) in Stop, Fast (F.F. or Rewind), Pause, Record and Playback modes.

Note: When Record and Play buttons are pressed to set N-582Z in Record mode, the Cam is first set to the record position in a short period of time then stays at the play position.
Therefore, to keep the Cam at the record position, following procedure is required:
Short the both leads of capacitor C426 (4.7 μF 25 V) on the Logic P.C.B. Ass'y with a jumper wire, then press the Record and Play buttons.

(b) Reference Voltage

Reference voltage at the sliding contact of VR601 (Cam Control Volume) in each mode is as follows:

Mode	Reference Voltage (Typical Value)	
Record	4.1 V	1.1 V $^{+0.4}_{-0.2}$ V
Stop	3.0 V	1.7 V ±0.25 V
Fast (F.F./Rew.)	1.3 V	
Pause	− 2.8 V	2.6 V ±0.4 V
Play	−5.4 V	

(c) Resistors for Adjustment

Mode	Ref. No.	Typical Value
Stop	R501	9.1 kΩ (F)
Fast (F.F./Rew.)	R507	4.32 kΩ (F)
Pause	R514	287 kΩ (F)
Play	R511	174 kΩ (F)
Record	R499	27 kΩ

(d) Adjustment Procedures

1) Press the Stop button to set the N-582Z in Stop mode.
Adjust the value of R501 to obtain 3.0 V (±0.6 V) at the sliding contact of VR601.
Note: When R501 is adjusted, the reference voltage in Fast (F.F. or Rew.) mode is changed. Therefore, re-check of the reference voltage in Fast (F.F. or Rew.) mode is required.
If the reference voltage is out of the range, re-adjustment of R507 according to next step 2) is necessary.

2) Set the N-582Z in F.F. mode, then adjust the value of R507 so that the voltage of VR601 will become lower by 1.7 V (±0.25 V) than in Stop mode.

3) Press the Pause button to set the N-582Z in Pause mode.
Adjust the value of R514 to obtain −2.8 V (+0.4, -0.15 V) at the sliding contact of VR601.

4) Set the N-582Z in Playback mode, then adjust the value of R511 so that the voltage of VR601 will become lower by 2.6 V (±0.4 V) than in Pause mode.

5) Short the both leads of capacitor C426 with a jumper wire.
Set the N-582Z in Record mode, then adjust the value of R499 so that the voltage of VR601 will become higher by 1.1 V (+0.4, -0.2 V) than in Stop mode.
Note: Remove the short of C426 after completion of adjustment.

(3) Cam Timing Adjustment

(a) Remove the wires from the Control Motor terminals to set the motor open.

(b) Without loading a cassette tape and with pressing the Record Protecting switch with your finger tip, press the Record and Play buttons to set the N-582Z in Record mode.

(c) Turn the Cam and bring the "PY" mark toward the pointer by hand.
Reel Motor will rotate before the "PY" mark reaches the pointer.
Adjust the value of R488 so that the voltage at sliding contact of VR601 becomes -3.6 V (±0.3 V) when Reel Motor starts rotation.

(d) Observe the mute signal at the Q424 collector. Turn the Cam referring to above step (c) and check to insure that the voltage at the sliding contact of VR601 is -3.8 V (±0.3 V) when mute is released (mute signal changes from H to L).
(This voltage is determined by the adjustment of R488 in above step (c).)

(e) Observe the $\overline{\text{Rec.}}$ signal at the Q421 collector. Turn the Cam referring to above step (c) and adjust the value of R480 to obtain -2.1 V (±0.4 V) at the sliding contact of VR601 when $\overline{\text{Rec.}}$ signal change from H to L (bias oscillation will begin).

(f) Upon completion of above adjustment, re-connect wires to the motor terminals.

4.2. Tape Speed Adjustment

(1) Remove the Top Cover.
(2) Connect a Frequency Counter to the Output Jack.
(3) Load a 3 kHz Speed Wow/Flutter Tape (DA09006A) and play it back.
(4) Referring to Fig. 4.3, adjust the Tape Speed Adjustment Volume (VR501) incorporated in the Capstan Motor to obtain 3,000 Hz on the Frequency counter.

CCW: Motor drives slowly.
CW: Motor drives fast.

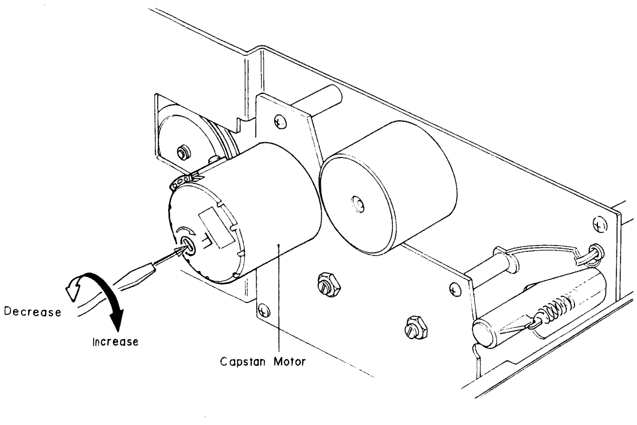


Fig. 4.3

4.3. Record Head and Playback Head Tilt Adjustment

Note: On items 4.3 – 4.9, refer to Fig. 4.4 flow chart. Refer to Figs. 4.5 and 4.6.

(1) Load a Tilt Check Gauge M-9039 (DA09039A) in the N-582Z.

(2) Clip the grounding terminal of the Tilt Check Gauge with one end of the cord with clip, and the chassis of the N-582Z with the other end.

(3) Remove both of the Height Gears.

(4) Set the N-582Z in Play mode. Check to insure whether the Beacons Playback Head "Upper" or "Lower" and Record Head "Upper" or "Lower" are illuminating. In order not to give damages onto the head surfaces, push both of slide knobs of the Gauge to the direction of arrow marks, then return them to the original place to be in contact with record head and playback head surfaces after Play mode is securely locked.

(5) Check to insure freedom from contact between the Gauge and pad lifter.

(6) Beacon Playback Head "Lower" will light on when height adjustment screw (P) turned clockwise but Playback Head "Upper" when counterclockwise. Adjust so that both "Upper" and "Lower" will light on even when you move the slide knobs to the direction of arrow marks and then return them to the original place.

(7) Same procedures will apply to the Beacons Record Head "Upper" and "Lower", except for the height adjustment screw (R).

(8) Set the N-582Z in Stop mode and fit both of the serrated height gears. Then set the N-582Z again in Play mode and insure all of the 4 Beacons are illuminating. If not, (3) through (7) will have to be repeated till satisfactory results are obtained.

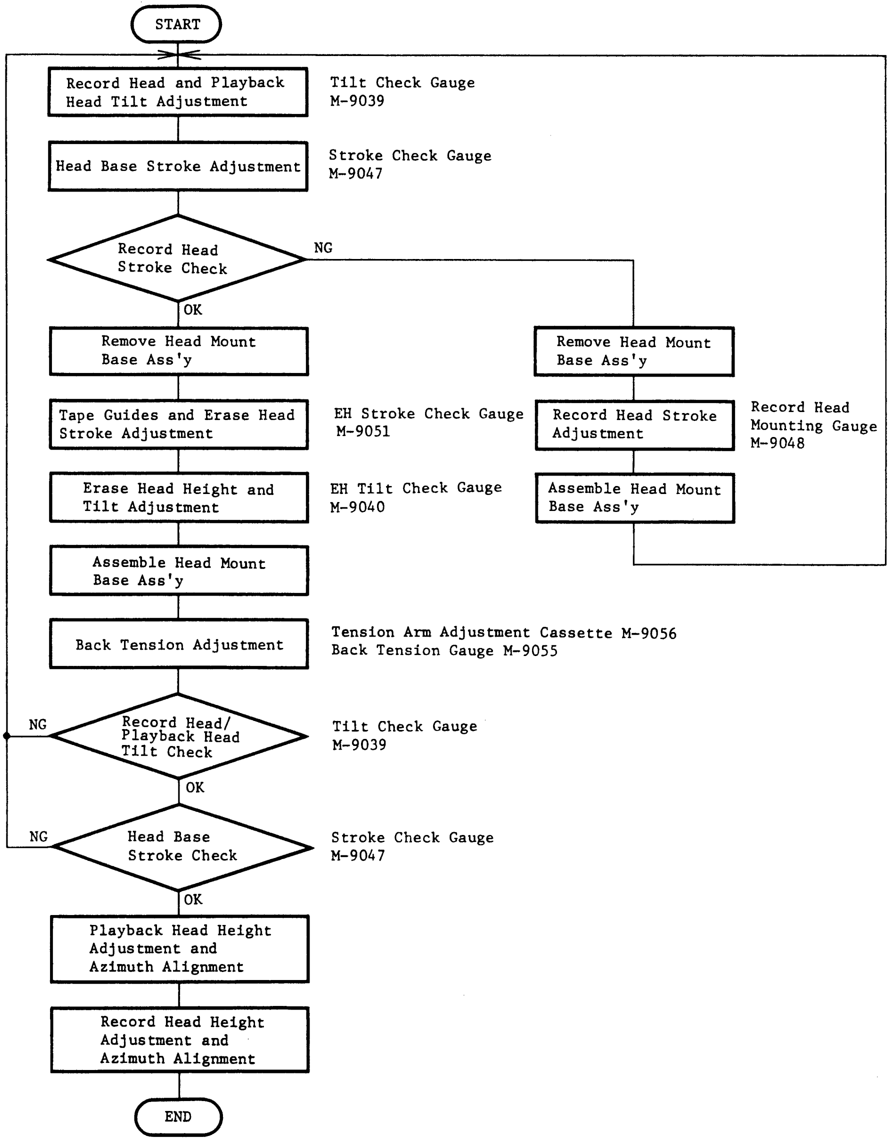

START
Record Head and Playback Head Tilt Adjustment
Tilt Check Gauge M-9039
Head Base Stroke Adjustment
Stroke Check Gauge M-9047
Record Head Stroke Check
NG
OK
Remove Head Mount Base Ass'y
Tape Guides and Erase Head Stroke Adjustment
EH Stroke Check Gauge M-9051
Erase Head Height and Tilt Adjustment
EH Tilt Check Gauge M-9040
Assemble Head Mount Base Ass'y
Remove Head Mount Base Ass'y
Record Head Stroke Adjustment
Record Head Mounting Gauge M-9048
Assemble Head Mount Base Ass'y
Back Tension Adjustment
Tension Arm Adjustment Cassette M-9056
Back Tension Gauge M-9055
NG
Record Head/ Playback Head Tilt Check
Tilt Check Gauge M-9039
OK
NG
Head Base Stroke Check
Stroke Check Gauge M-9047
OK
Playback Head Height Adjustment and Azimuth Alignment
Record Head Height Adjustment and Azimuth Alignment
END

Fig. 4.4

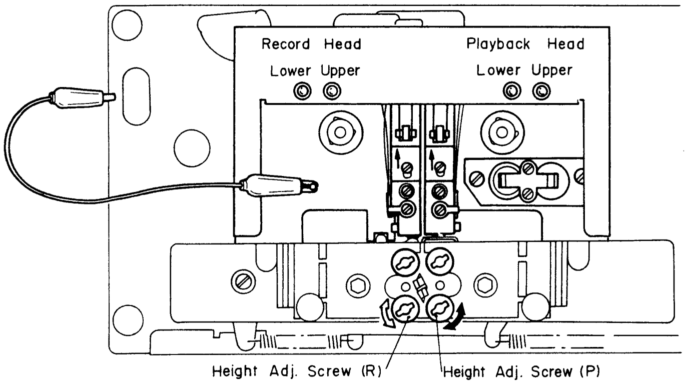

Record Head
Lower Upper
Playback Head
Lower Upper
Height Adj. Screw (R)
Height Adj. Screw (P)

Fig. 4.5

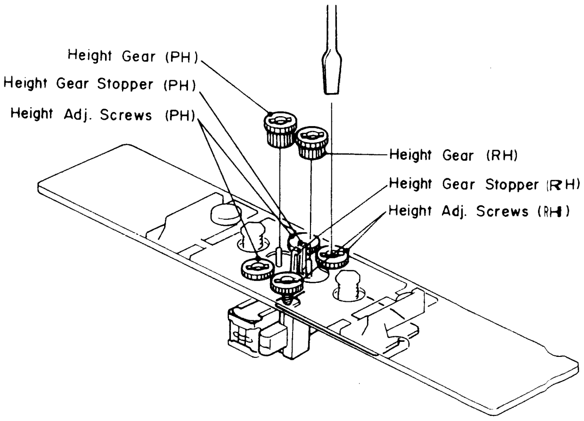

Height Gear (PH)
Height Gear Stopper (PH)
Height Adj. Screws (PH)
Height Gear (RH)
Height Gear Stopper (RH)
Height Adj. Screws (RH)

Fig. 4.6

4.4. Head Base Stroke Adjustment

Note: Before you conduct this adjustment, adjust with a "Tilt Check Gauge" to insure freedom from tilt on the playback head and record head.

(1) Head Base Stroke Adjustment in Play Mode

Refer to Fig. 4.7.

(a) Load a Stroke Check Gauge M-9047 (DA09047B) in the N-582Z.

(b) Move Record Head Indicator and Playback Head Indicator to the direction of arrow mark "A" with your finger tip and then set the N-582Z in Play mode. Then slowly release the Indicators and insure whether each of the Indicators is in contact with record and playback heads.

(c) Check to insure whether the "P" pointer on the Playback Head Indicator locates between the 2 lines on the Indicator Plate.

(d) If the playback head stroke is noted to be misaligned, adjustment can be made by moving the stroke adjuster assembled in the head base assembly (either forwardly or backwardly).

(e) Check to insure whether the "P" pointer on the Playback Head Indicator locates between the 2 lines on the Record Head Indicator, thus check can be made on record head stroke.

(f) If the record head stroke is noted to be misaligned, adjustment can be made with a Record Head Mounting Gauge M-9048 (DA09048A).

(2) Head Base Stroke Adjustment in Cue Mode

Refer to Figs. 4.7 and 4.8.

(a) Load a Stroke Check Gauge M-9047 (DA09047B) in the N-582Z.

(b) Move Record Head Indicator and Playback Head Indicator to the direction of arrow mark "A" with your finger tip and then set the N-582Z in Cue (F.F. and Pause) mode.
Then slowly release the Indicators and insure whether each of the Indicators is in contact with record and playback heads.

(c) Check to insure whether the "C" pointer on the Playback Head Indicator locates between the 2 lines on the Indicator Plate.

(d) If the playback head stroke is noted to be misaligned, adjust VR403 on the Logic P.C.B. Ass'y till satisfactory results are obtained.

(e) After completion of the Head Base Stroke Adjustment, check to insure accuracy of the Head Base Stroke Adjustment in Play mode.
If the above are inaccurate, items (1) and (2) will have to be repeated till satisfactory results are obtained.

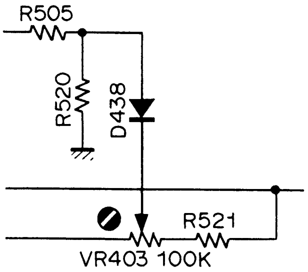


Fig. 4.8

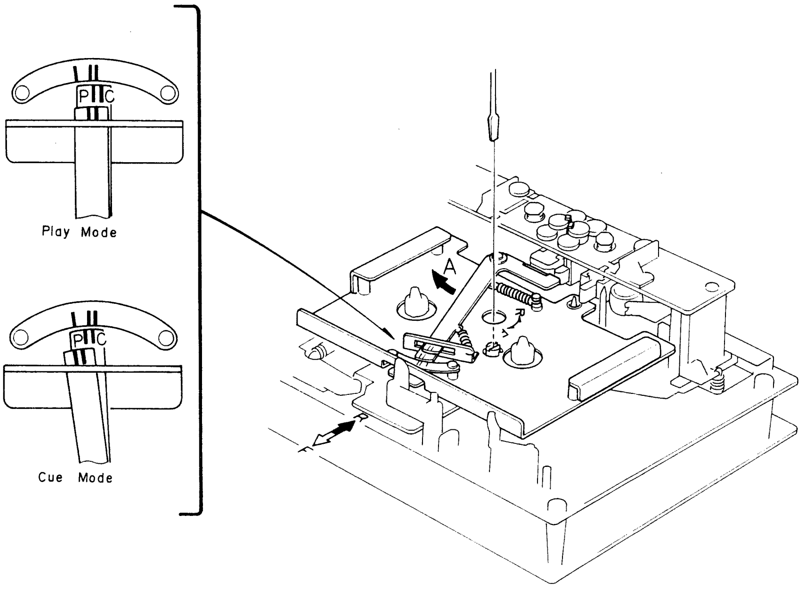


Fig. 4.7

4.5. Tape Guides Adjustment and Erase Head Stroke Adjustment

Remove Head Mount Base Ass'y referring to item 2.31. Refer to Figs. 4.9 and 4.10.

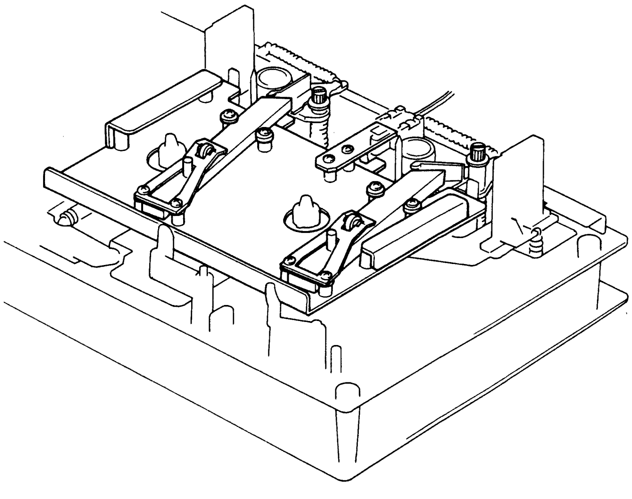


Fig. 4.9

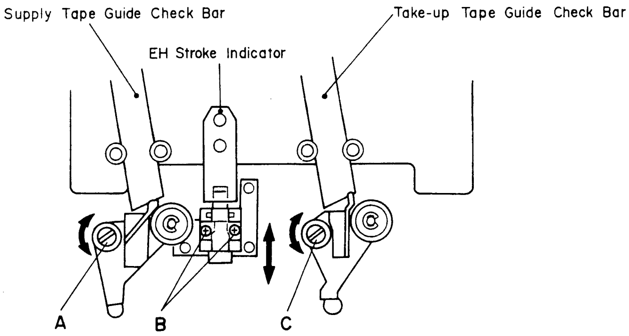


Fig. 4.10

(1) Supply Tape Guide Height Adjustment

(a) Load an EH Stroke Check Gauge M-9051 (DA-09051A) in the N-582Z.

(b) Set the N-582Z in Play mode.

(c) Slide the Supply Tape Guide Check Bar down against the supply tape guide, thus check can be made on supply tape guide height.

(d) If the supply tape guide is misaligned, the Supply Tape Guide Check Bar will not come into the supply tape guide. If such is noted, turn to adjust the height adjustment nut A till the Supply Tape Guide Check Bar is accepted by the supply tape guide.

(e) If the above are insured, set the N-582Z in Pause mode, then in Play mode to see whether adjustments are appropriately made. If not, (b) through (e) will have to be repeated till satisfactory results are obtained.

(2) Take-up Tape Guide Height Adjustment

(a) Load an EH Stroke Check Gauge M-9051 (DA-09051A) in the N-582Z.

(b) Set the N-582Z in Play mode.

(c) Slide the Take-up Tape Guide Check Bar down against the take-up tape guide, thus check can be made on take-up tape guide height.

(d) If the take-up tape guide is misaligned, the Take-up Tape Guide Check Bar will not come into the take-up tape guide. If such is noted, turn to adjust the height adjustment nut C till the Take-up Tape guide Check Bar is accepted by the take-up tape guide.

(e) If the above are insured, set the N-582Z in Pause mode, then in Play mode to see whether adjustments are appropriately made. If not, (b) through (e) will have to be repeated till satisfactory results are obtained.

(3) Erase Head Stroke Adjustment

(a) Load an EH Stroke Check Gauge M-9051 (DA-09051A) in the N-582Z.

(b) Set the N-582Z in Play mode, thus check can be made on erase head stroke through the EH Stroke Indicator.

(c) Check to insure whether the erase head surface is aligned with red line on the EH Stroke Indicator. If not, adjust the erase head stroke by loosening 2 screws B that assemble erase head and erase head plate.

(d) After completion of adjustment, 2 pcs. of screws shall be locked with lock tight paint.

4.6. Erase Head Height and Tilt Adjustment

Refer to Figs. 4.11 and 4.12.

(1) Remove Head Mount Base Ass'y referring to item 2.31.

(2) Load an EH Tilt Check Gauge M-9040 (DA09040A) in the N-582Z.

(3) Set the N-582Z in Stop mode.

(4) Check to insure whether one of the 3 Beacons is illuminating. Look down the mirror as shown by an arrow mark and slowly turn the Screw "Height" counterclockwise (or clockwise) so that the two horizontal lines on the mirror will become superposed on the line (in different color) of the erase head, and check to insure whether Beacon "1" is illuminating.

(5) Turn Screw "Tilt" counterclockwise (or clockwise) to light on Beacon "2". Excessive turning will cause the Beacon "1" to light off. Adjustments of Screw "Tilt" will therefore be conducted till both of the Beacons "1" and "2" illuminate.

(6) Turn Screw "Azimuth" counterclockwise or clockwise) to light on Beacon "3". Excessive turning will cause either Beacon "1" or "2" to light off, and therefore adjust Screw "Azimuth" until all of the 3 Beacons "1", "2" and "3" illuminate.

(7) Check to insure whether the horizontal line on the mirror corresponds to that on the erase head. If not, (4) through (7) will have to be repeated till satisfactory results are obtained.

(8) After completion of adjustment, 3 pcs. of screws shall be locked with lock tight paint.

Note: Before use of this gauge, check to insure freedom from dust or dirts, or overflow in the groove of the erase head surface.

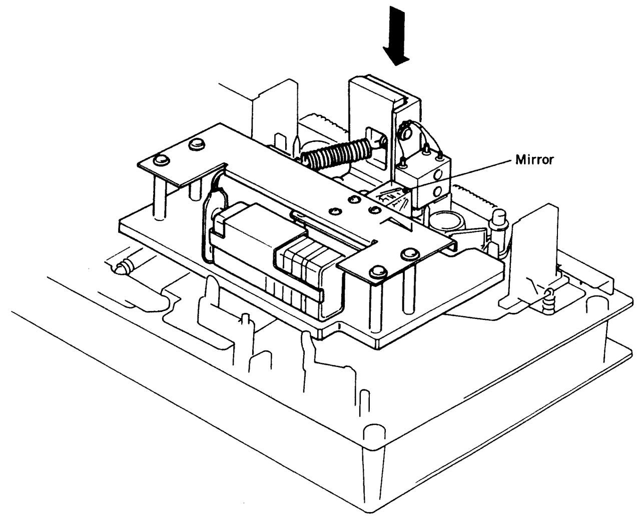


Fig. 4.11

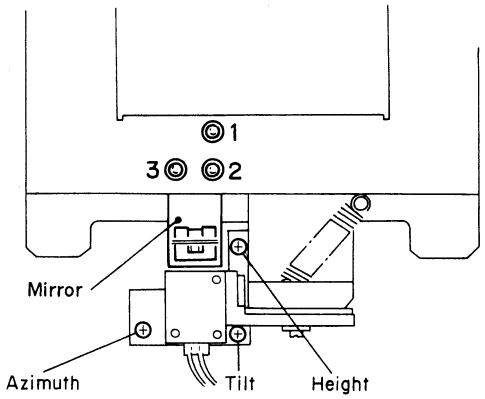


Fig. 4.12

4.7. Back Tension Adjustment

Refer to Figs. 4.13 – 4.16.

(1) Load a Tension Arm Adjustment Cassette (DA-09056A) in the N-582Z referring to Fig. 4.13.

(2) Set the N-582Z in Play mode.

(3) Bend the Back Tension Arm with pliers so that the gap between the Cassette Holding Spring assembled on the Head Base Ass'y and the Back Tension Arm becomes 0.5 mm as shown in Fig. 4.14. Do not bend the top of the Back Tension Arm.

(4) Set the N-582Z in Stop mode, and remove the Tension Arm Adjustment Cassette (DA09056A), then set the N-582Z in Cue mode.
In Cue mode, check to insure that the gap is found between the Supply Reel Hub B Ass'y and the Felt of Back Tension Ass'y as shown in Fig. 4.15.

(5) Load the Back Tension Gauge (DA09055A) in the N-582Z.

(6) Set the N-582Z in Play mode and read the torque value of Back Tension Gauge.
If the value is in a range of 6 g-cm to 10 g-cm, adjustment is not necessary. If not, change the installation point of the Back Tension Spring as shown in Fig. 4.16, and obtain the torque of 7 g-cm to 9 g-cm range.

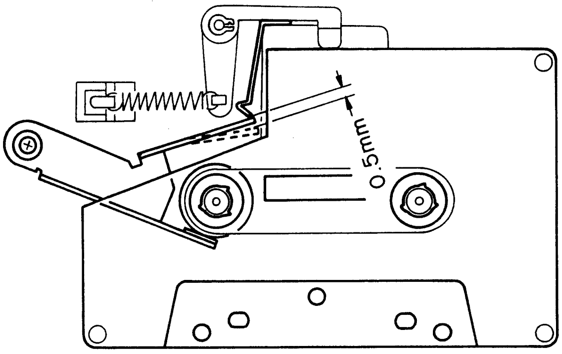


Fig. 4.14

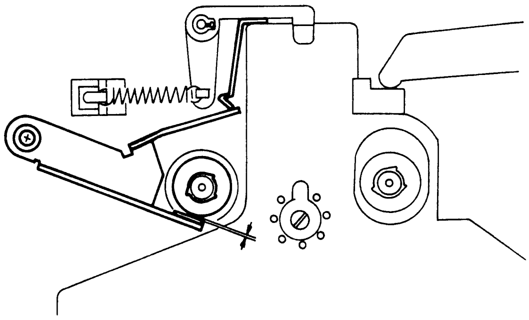


Fig. 4.15

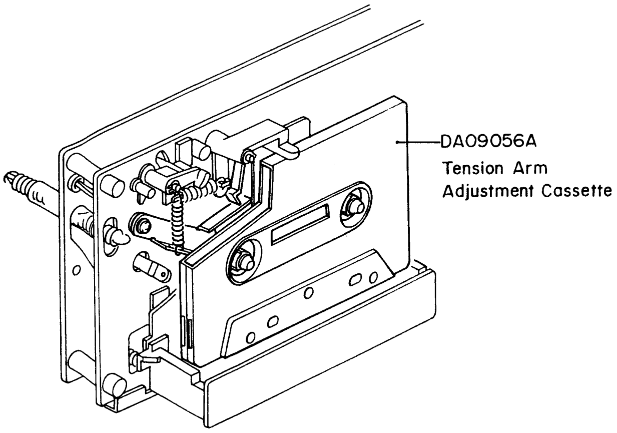


Fig. 4.13

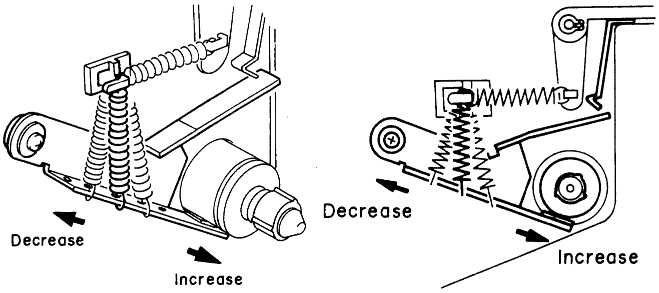


Fig. 4.16

4.8. Playback Head and Record Head Height Adjustment and Azimuth Alignment

Refer to Fig. 4.17.

(1) Playback Head Height Adjustment and Aximuth Alignment

(a) Set the Monitor switch to Tape, then connect a VTVM to the Output Jacks.

(b) Load a 1 kHz Track Alignment Tape (DA09007A), then set the N-582Z in Play mode.

(c) Turn the PH Height Gear until the outputs of both channels become minimum.

(d) Load a 15 kHz Azimuth Tape (DA09004A), then set the N-582Z in Play mode.

(e) Turn the PH Azimuth Alignment Screw until the outputs of both channels become maximum.

(f) Repeat (b) through (e) one or two times to obtain optimum performance.

(2) Record Head Height Adjustment and Azimuth Alighment

(a) Set the Monitor switch to Tape, then connect a VTVM to the Output Jacks.

(b) Load a Reference SX Tape (DA09025A). Set the Eq. and Tape switches to 70 μs and SX, then set the N-582Z in Record and Play mode.

(c) Set the Tone switch to 400 Hz, then turn the RH Height Gear until the outputs of both channels become maximum.

(d) Set the Tone switch to 15 kHz, then turn the RH Azimuth Alignment Screw until the outputs of both channels become maximum.

(e) Repeat (c) and (d) one or two times.

(f) After completion of the above adjustment, record 400 Hz tone to the same portion of sides A and B of the tape.

(g) Immerse the recorded tape in a magnetized developing solution. In turn, check to insure that the recording head tracks across the center are separated with a distance of 0.55 to 0.75 mm (typically 0.65 mm) as illustrated in Fig. 4.18.

Note: Liquid for tape magnetized development solution.
"MAGNA-SEE, SOUND CRAFT a product of CBS RECORDS a division of Columbia Broadcasting System, Inc., Danbury, Conn. 06810 U.S.A., or equivalent".
After development, clean the tape otherwise pressure rollers and heads will become dirty.

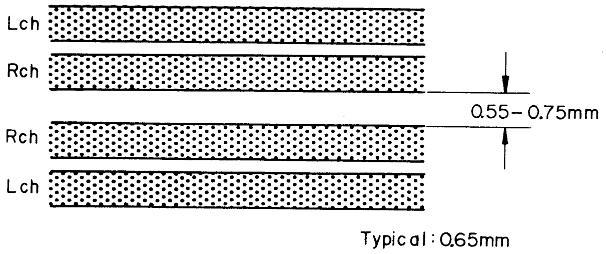


Fig. 4.18

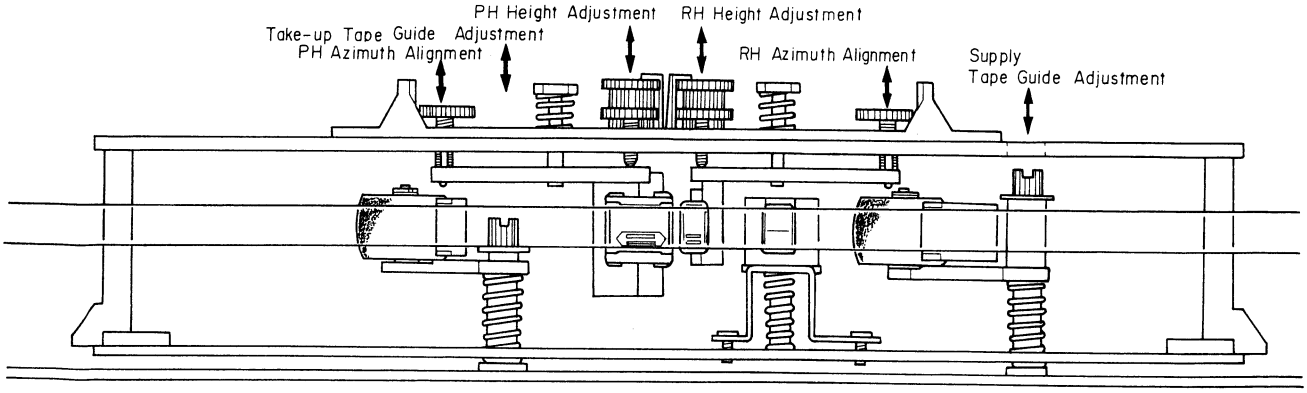


Fig. 4.17

4.9. Record Head Stroke Adjustment

Refer to Figs. 4.19 and 4.20.

Note: This adjustment will be required only to insure freedom from misalignment of the record head stroke in the record head stroke check mode.

(1) Check the accuracy of the record head stroke.

(2) Remove Head Mount Base Ass'y referring to item 2.31.

(3) Remove the record head assembly.

(4) Adjustment of Record Head Mounting Gauge M-9048 (DA09048A)
   - (a) Mount the Block B onto the Mounting Gauge Plate.
   - (b) Loosen the 2 screws fixing the Block A.
   - (c) As shown in Fig. 4.19, hold the Gauges (3.05 mm and 0.1 mm thickness) between the Block A and Block B, and fix the Block A with screws, pushing the Block A to the 2 guide pins.

(5) Remove the Block B from the Mounting Gauge Plate.

(6) As shown in Fig. 4.20, mount the R-8L record head assembly onto the Mounting Gauge Plate, then check the location of the R-8L record head surface. (If record head contacts to the Block C, loosen 2 pcs. of screws that assemble record head and record head plate, then place the R-8L record head assembly onto the Plate.)

(7) Remove the R-8L record head assembly from the Mounting Gauge Plate.

(8) Readjustment of Record Head Mounting Gauge M-9048 (DA09048A)
   - (a) Mount the Block B onto the Mounting Gauge Plate.
   - (b) Loosen the 2 screws fixing the Block A.
   - (c) As shown in Fig. 4.19, hold the Gauges (3.05 mm and either one of 0.05, 0.15, 0.2, 0.25, 0.3 or 0.35 mm thickness) between the Block A and Block B, and fix the Block A with screws, pushing the Block A to the 2 guide pins.

(9) Remove the Block B from the Mounting Gauge Plate.

(10) Mount the R-8L record head assembly onto the Mounting Gauge Plate.

(11) As shown in Fig. 4.20, loosen 2 pcs. of screws that assemble record head and record head plate.
As the location of the Block A is secured by the item (8)-(c), push the record head to the directions A and B, then tighten 2 pcs. of screws.

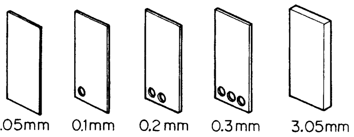
(12) Check to insure freedom from gap between the Block C and record head surface, then tighten the 2 pcs. of screws on the record head assembly with lock tight paint.

(13) Remove the R-8L record head assembly from the Mounting Gauge Plate.

(14) Assemble the record head assembly to the head mount base assembly.

(15) Assemble the head mount base assembly to the mechanism assembly.

(16) Check the record head stroke.
If the above are inaccurate, items (1) through (16) will have to be repeated till satisfactory results are obtained.



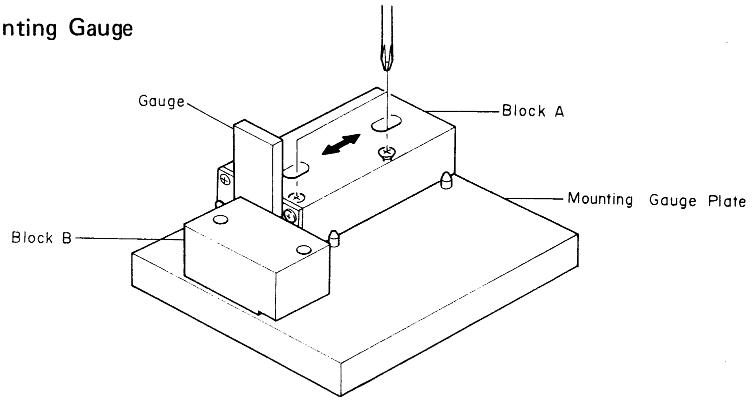


Fig. 4.19

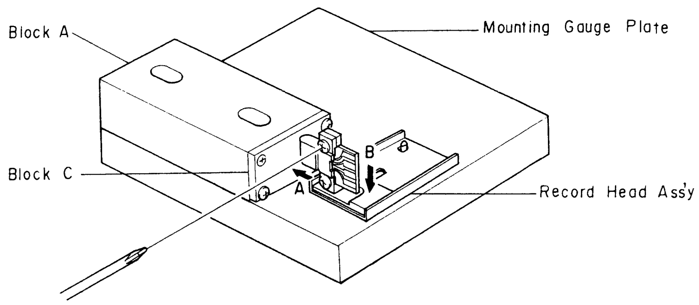


Fig. 4.20

4.10. Tape Travelling Adjustment

The adjustment shall be made with a modified version of the current type EXII C-90 as shown in Fig. 4.21 (error will be made if a current type Tape Travelling Cassette (DA09011A) should be used for this purpose).

While modifying an EXII C-90, the tape guides in the cassette housing shall be kept protected to avoid tilt.

Check shall be made in the following procedures:

(1) An EXII C-90 Tape thus modified shall be loaded onto the N-582Z.

(2) Release the back-tension (rotate the Supply Reel and feed out some length of tape) and set the N-582Z in Play mode.

(3) In this juncture, check to insure whether the tape is free from waving or slippage from the tape guide.

(4) When the modified EXII C-90 is played back, check to insure whether the tape is freedom from waving from head surface or at pressure rollers.

(5) If either of waving or slippage from the tape guide should be noted, adjustments of "4.3. Record Head and Playback Head Tilt Adjustment", "4.4. Head Base Stroke Adjustment", "4.5. Tape Guides Adjustment and Erase Head Stroke Adjustment". "4.6. Erase Head Height and Tilt Adjustment", "4.7. Back Tension Adjustment", "4.8. Playback Head and Record Head Height Adjustment and Azimuth Alignment", "4.9. Record Head Stroke Adjustment", etc. will be required.

As a case may be, the said waving or slippage may have been caused from defective Supply Pressure Roller Ass'y or Take-up Pressure Roller Ass'y without parallel contact with capstans. If such are noted, the Pressure Roller Assemblies will have to be replaced.

Further, excessively weak take-up torque or strong take-up torque may cause defective tape travelling.

The N-582Z is intended to be an adjustment-free model, however if the similar matters as above should be noted, please replace the Reel Hub Ass'y to obtain appropriate take-up torque.

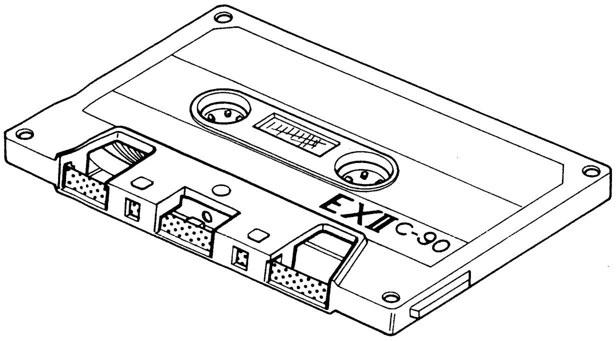


Fig. 4.21

4.11. Flywheel Holder Adjustment

(1) Refer to Fig. 4.22.
Tighten the Thrust Screws until the gap between the Flywheel Assemblies and Thrust Screws becomes minimized when both of the Capstan Shafts are moved backwardly and forwardly (the Thrust Springs between the Capstan Flanges and Flywheel Thrust Caps are in a flat state).
Excessive tightening of the Thrust Screws however will give damages on the Flywheel Assemblies, to which careful attention is invited.

(2) Return the Thrust Screws by 1/2 turn.

(3) Fixing the Thrust Screws with a screwdriver, lock the Lock Nut.

(4) Apply a quantity of lock tight paint to the Thrust Screws.

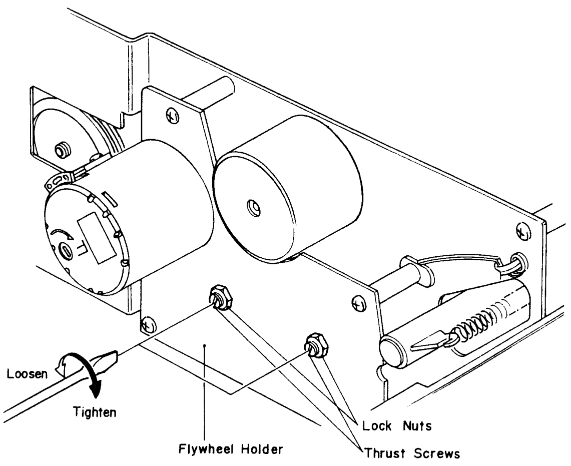


Fig. 4.22

4.12. Eject Wire Adjustment

(1) Referring to Fig. 4.23, insert a 1.5 mm spacer between the Eject Arm and Eject Stopper by turning the Eject Arm in the illustrated direction, then set the N-582Z in Playback mode.

(2) With pushing the Eject Arm by hand, loosen the screw and then pull the Eject Wire in the direction of the arrow until it stops as shown in Fig. 4.24.

(3) Tighten the screw, then apply a quantity of lock tight paint.

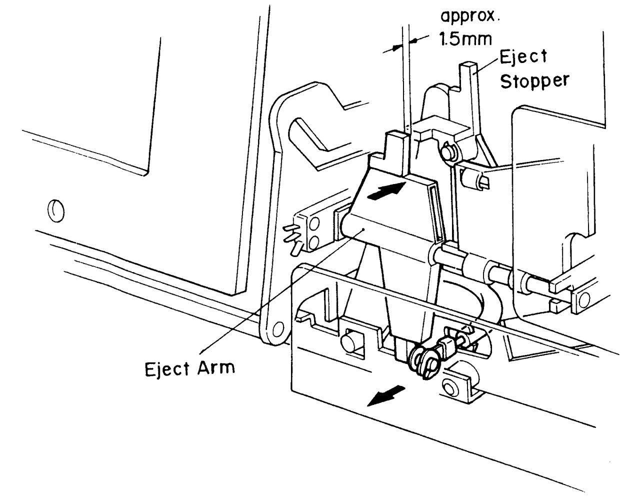


Fig. 4.23

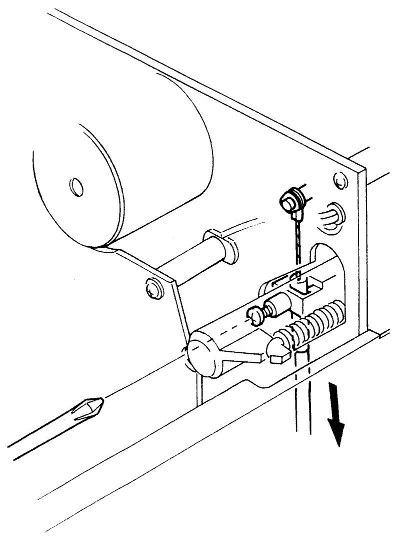


Fig. 4.24

4.13. Control Button Stroke Adjustment

Normal state of push button stroke for Logic Control on the Front Panel is as follows:

(1) When Front Panel is in place, push the Control Button with a finger tip and see it is has an allowance of 0.6 mm. If it does, then push it a little further for another 0.4 mm and see if the switch is ON.
This allowance can be adjusted by loosening the screws that assembled Control Button Holder and Front Chassis together. After the adjustment, lock the screws with lock gight paint.

(2) When performing adjustment, put the Front Panel aside, but for checking, do it with the Panel on.

4.14. Lubrication

N-582Z is a lubrication-free cassette deck except when parts are replaced. Apply the following lubricant for each replaced part:

(1) LAUNA #100
Capstan Shaft
Pressure Roller Shaft
Thrust Cap

(2) FLOIL GB-TS-1
Reel Hub Shaft
Thrust portion on the Capstan Shaft
FLOIL GB-TS-1, made by Kanto Chemicals Co., Ltd., in Japan.
We suggest that you use the above or equivalent type. If unavailable please contact Kanto Chemicals Co., Ltd., 2-7 Kanda Suda-cho Chiyoda-ku, Tokyo 101 Japan.

(3) Silicon Oil #3000CST
Air Damper Piston
Note: Excessive lubrication may cause defective damper action as the 0.2^{ϕ} hole at the end of the cylinder may be filled with oil.

5. PARTS LOCATION FOR ELECTRICAL ADJUSTMENT

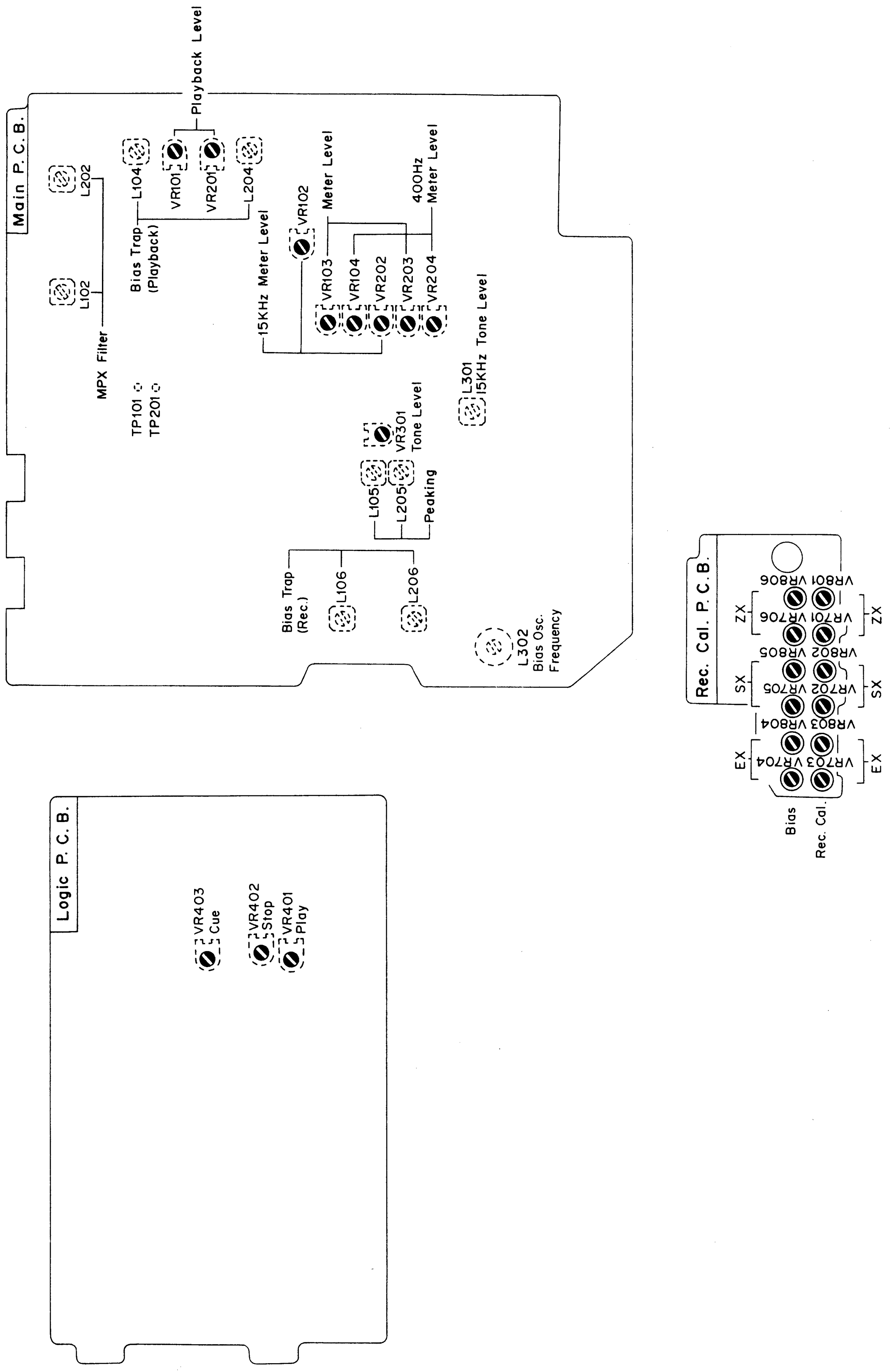

Main P. C. B.
Playback Level
L104
VR101
VR201
L204
L202
L102
Bias Trap (Playback)
MPX Filter
TP101
TP201
15KHz Meter Level
VR102
Meter Level
400Hz Meter Level
VR103
VR104
VR202
VR203
VR204
15KHz Tone Level
L301
VR301
Tone Level
L105
L205
Peaking
Bias Trap (Rec.)
L106
L206
L302
Bias Osc. Frequency
Rec. Cal. P. C. B.
VR801
VR806
VR701
VR706
VR802
VR805
VR702
VR705
VR803
VR804
VR703
VR704
ZX
SX
EX
Bias
Rec. Cal.
Logic P. C. B.
VR403
Cue
VR402
Stop
VR401
Play

Fig. 5.1 Serial No.: A12102102 –

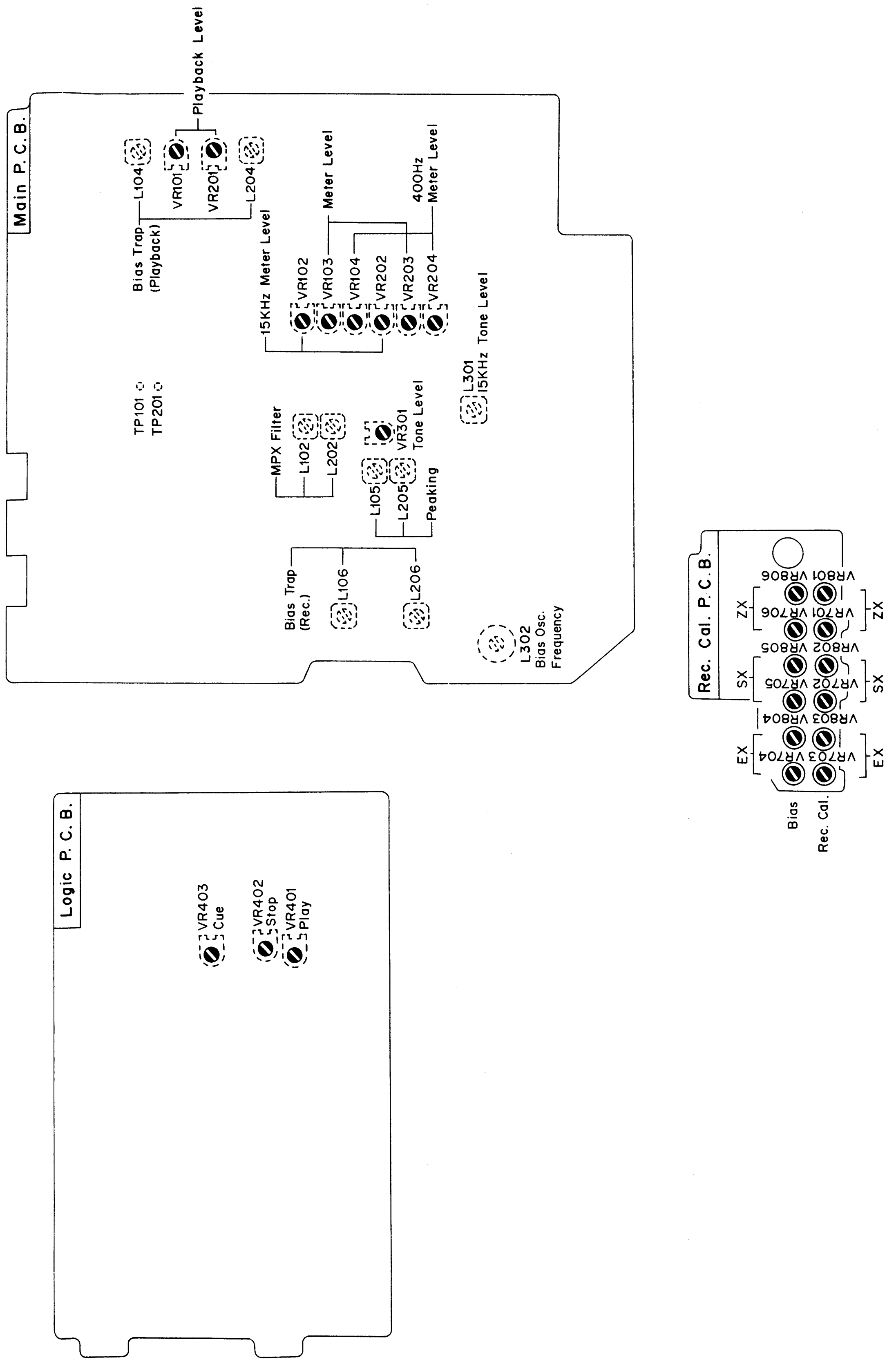

Main P. C. B.
Playback Level
L104
VR101
VR201
L204
Bias Trap (Playback)
15KHz Meter Level
Meter Level
400Hz Meter Level
VR102
VR103
VR104
VR202
VR203
VR204
Tone Level
TP101
TP201
L301
15KHz Tone Level
MPX Filter
L102
L202
VR301
Tone Level
L105
L205
Peaking
Bias Trap (Rec.)
L106
L206
L302
Bias Osc. Frequency
Rec. Cal. P. C. B.
VR801
VR806
VR701
VR706
VR802
VR805
VR702
VR705
VR803
VR804
VR703
VR704
ZX
SX
EX
Bias
Rec. Cal.
Logic P. C. B.
VR403
Cue
VR402
Stop
VR401
Play

Fig. 5.2 Serial Nos.: A12101001 – A12102101

6. ELECTRICAL ADJUSTMENTS AND MEASUREMENTS

6.1. Adjustment and Measurement Instructions

Note: Electrical adjustment should be performed after mechanical adjustment is completed.

STEP	ITEM	SIGNAL SOURCE	OUTPUT CONNECTION	MODE	ADJUSTMENT	REMARKS
1	Tape Speed Adjustment	3 kHz Speed and Wow/Flutter Tape (DA09006A)	Frequency Counter to Output Jacks	Playback	Capstan Motor Governor P.C.B. VR501	Adjust VR501 to obtain 3 kHz ±0.5%. (VR501 is incorporated in the Capstan Motor.)
2	Tone Calibration	Test Tone 400 Hz and 15 kHz	VTVM to TP101, TP201 on the Main P.C.B.	Monitor SW – Source Test Tone SW – 400/15 k	Main P.C.B. VR301 (400 Hz) L301 (15 kHz)	1. Set the Test Tone switch to 400 Hz. Turn the Output level control fully clockwise (maximum position). 2. Adjust VR301 to obtain 90 mV ±0.2 dB on the VTVM (output will be 1 V (0 dB)). 3. Set the Test Tone switch to 15 kHz. 4. Adjust L301 to obtain 9 mV ±0.5 dB on the VTVM (output will be –20 dB against the level at 400 Hz).
3	Meter Level Calibration	400 Hz to Input Jacks and Test Tone 400 Hz and 15 kHz	VTVM to TP101, TP201 on the Main P.C.B.	Monitor SW – Source Test Tone SW – OFF/400/15 k	Main P.C.B. VR103, VR203 VR102, VR202 VR104, VR204 VR301 L301	1. Feed in 400 Hz, then adjust the Input Level control and Balance control to obtain 90 mV –1.5 dB on the VTVM. 2. Adjust VR103 (VR203) so that the 0 dB segment of the level meter starts illuminating. 3. Decrease input level by 20 dB, then check to insure that the level meters indicate –20 dB. 4. Set the Test Tone switch to 400 Hz, then adjust VR301 to obtain 90 mV –0.4 dB on the VTVM. 5. Adjust VR102 (VR202) so that the 0 dB segment of the level meter starts illuminating. 6. Set the Test Tone switch to 15 kHz, then adjust L301 to obtain 9 mV –0.4 dB on the VTVM. 7. Adjust VR104 (VR204) so that the 0 dB segment of the level meter starts illuminating. 8. Re-adjust the test tone according to step 2 "Test Tone Calibration".
4	MPX Filter Adjustment	19 kHz ±100 Hz to Input Jacks	VTVM to Output Jacks	Monitor SW – Source Test Tone SW – OFF MPX Filter SW – IN	Main P.C.B. L102, L202	1. Turn the Output level control fully clockwise (maximum position). 2. Adjust the Input Level control to obtain 1 V on the VTVM. 3. Set the MPX Filter switch to IN, then adjust L102 (L202) to obtain the minimum reading on the VTVM (the minimum reading will be less than –30 dB).
5	Playback Head Track Alignment	1 kHz Track Alignment Tape (DA09007A)	VTVM to Output Jacks	Playback Monitor SW – Tape Test Tone SW – OFF Eq. SW – 70 μs Dolby NR SW – OFF	PH Height Gear	Adjust the PH Height Gear to obtain minimum readings of both channels on the VTVM. Refer to "Playback Head Height Adjustment and Azimuth Alignment" in item 4.8.

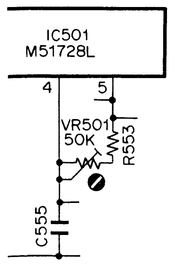

IC501
M51728L
4
5
VR501
50K
R553
C555

Fig. 6.1
1. Tape Speed

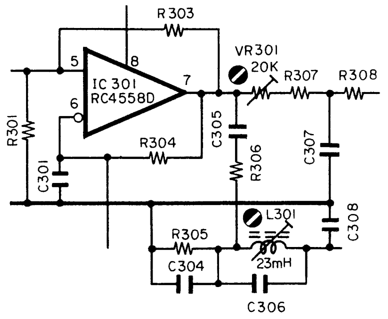

R303
5
8
IC 301
RC4558D
7
6
VR301
20K
R307
R308
R301
C301
R304
C305
R306
C307
L301
C308
R305
C304
23mH
C306

Fig. 6.2
2. Tone Calibration
3. Meter Level

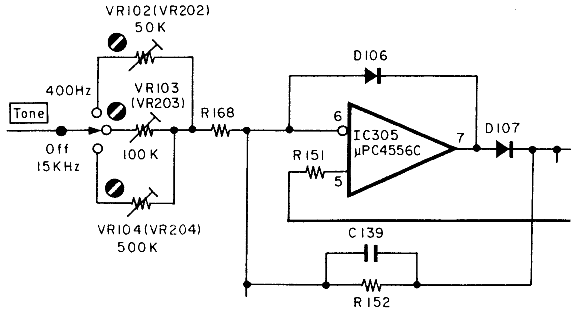

VR102(VR202)
50K
400Hz
VR103
(VR203)
Tone
Off
15KHz
100K
VR104(VR204)
500K
R168
D106
6
IC305
μPC4556C
7
D107
R151
5
C139
R152

Fig. 6.3.1
3. Meter Level

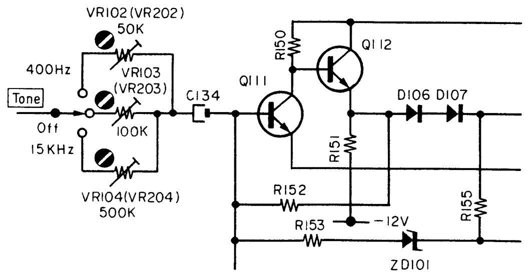

VR102(VR202)
50K
400Hz
VR103
(VR203)
Tone
Off
15KHz
100K
VR104(VR204)
500K
C134
Q111
R150
Q112
D106 D107
R151
R152
R153
–12V
R155
ZD101

Fig. 6.3.2
3. Meter Level

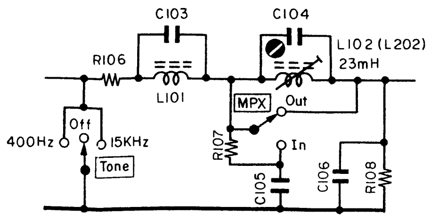

C103
C104
L102 (L202)
23mH
R106
L101
MPX
Out
Off
400Hz
15KHz
Tone
R107
In
C105
C106
R108

Fig. 6.4
4. MPX Filter

STEP	ITEM	SIGNAL SOURCE	OUTPUT CONNECTION	MODE	ADJUSTMENT	REMARKS
6	Playback Head Azimuth Alignment	15 kHz Azimuth Tape (DA09004A)	VTVM to Output Jacks	Playback Monitor SW – Tape Test Tone SW – OFF Eq. SW – 70 µs Dolby NR SW – OFF	Playback Head Azimuth Alignment Screw	Adjust the Playback Head Azimuth Alignment Screw to obtain the maximum readings of both channels on the VTVM. Refer to "Playback Head Height Adjustment and Azimuth Alignment" in item 4.8. Note: Repeat steps 5 and 6 one or two times to obtain optimum performance.
7	Playback Level Adjustment	400 Hz Level Tape (DA09005A)	VTVM to TP101, TP201 on the Main P.C.B.	Same as above	Main P.C.B. VR101, VR201	Adjust VR101 (VR201) to obtain 90 mV on the VTVM.
8	Playback Frequency Response Adjustment	400 Hz Level Tape (DA09005A) 10 kHz PB Frequency Response Tape (DA09003A) 15 kHz PB Frequency Response Tape (DA09002A) 20 kHz PB Frequency Response Tape (DA09001A)	VTVM to Output Jacks	Playback Monitor SW – Tape Tape SW – SX Eq. SW – 70 µs Dolby NR SW – OFF	Main P.C.B. R127, R227 R128, R228	1. Load a 400 Hz level tape and play it back. Adjust the Output level control to a certain level (for example 0 dB). 2. Load 10 kHz, 15 kHz and 20 kHz PB frequency response tapes and adjust the playback head azimuth to obtain maximum levels on the VTVM with each tape. Short R127 (R227) or R128 (R228) to obtain the following levels against the level for the 400 Hz level tape. 10 kHz: –20 dB –1 dB to +2 dB 15 kHz: –20 dB –1 dB to +3 dB 20 kHz: –20 dB –1 dB to +4 dB 3. Conduct step 6 "Playback Head Azimuth Alignment". 4. If above is not sufficient, refer to "Playback Frequency Response Adjustment" in item 6.2.
9	Bias Oscillation Frequency and Erase Current Adjustment		VTVM and Frequency Counter across the additional 0.1 Ω resistor and Frequency Counter to CN7-1	Record, Pause Monitor SW – Source Tape SW – ZX Eq. SW – 70 µs Dolby NR SW – OFF MPX SW – OUT	Main P.C.B. L302 R319, R320	1. Connect an additional 0.1 Ω resistor in series to the Erase Head, then connect a VTVM across it. 2. Adjust L302 to obtain 105 kHz on the frequency counter. 3 Check the erase current by the VTVM. Erase current will be in a range of 310 mA to 400 mA (typically approx. 350 mA). If erase current is not sufficient, increase it by shorting R319 or R320. 4. After completion of the erase current adjustment, re-check the bias oscillation frequency. 5. Remove the additional 0.1 Ω resistor.
10	Record Amplifier Equalizer Adjustment	23 kHz (–20 dB) to Input Jacks	VTVM to CN6-3, CN6-1 on the Main P.C.B.	Same as above	Main P.C.B. L105, L205	1. Remove the bias-cut jumper from the dip side of the Main P.C.B. Ass'y. 2. Adjust L105 (L205) to obtain peak reading at 23 kHz on the VTVM. 3. Re-solder the bias-cut jumper.
11	Bias Trap Adjustment (Record Amp.)	Remove input signals	VTVM to IC303-1, -7 on the Main P.C.B.	Same as above	Main P.C.B. L106, L206	Adjust L106 (L206) to obtain the minimum reading on the VTVM.

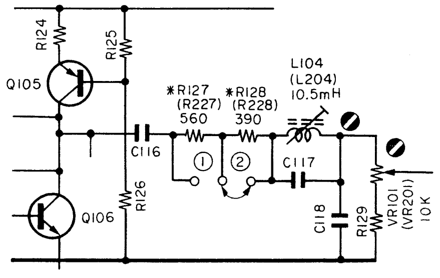

R124
R125
Q105
Q106
R126
C116
*R127
(R227)
560
*R128
(R228)
390
①
②
L104
(L204)
10.5mH
C117
C118
R129
VR101
(VR201)
10K

Fig. 6.5
7. Playback Level
8. Playback Frequency Response
12. Bias Trap (Playbck Amp.)

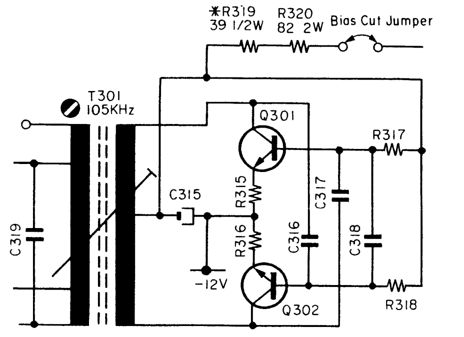

*R319
39 1/2W
R320
82 2W
Bias Cut Jumper
T301
105KHz
Q301
R317
C315
R315
C317
C319
R316
C316
C318
-12V
Q302
R318

Fig. 6.6
9. Bias Oscillation Frequency and Erase Current

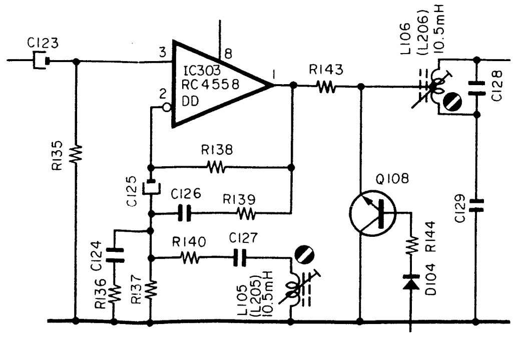

C123
3
8
IC303
RC4558
DD
2
1
R143
L106
(L206)
10.5mH
C128
R135
R138
C125
C126
R139
Q108
C129
C124
R140
C127
R136
R137
L105
(L205)
10.5mH
D104
R144

Fig. 6.7
10. Record Amplifier Equalizer
11. Bias Trap (Record Amp.)
15. Overall Frequency Response

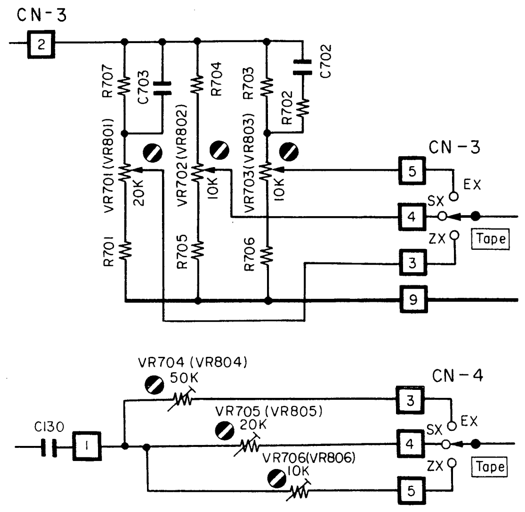

CN-3
2
R707
C703
R704
R703
C702
R702
VR701(VR801)
20K
VR702(VR802)
10K
VR703(VR803)
10K
CN-3
5
EX
4
SX
ZX
Tape
3
9
R701
R705
R706
VR704 (VR804)
50K
CN-4
VR705 (VR805)
20K
C130
1
3
EX
4
SX
VR706(VR806)
10K
ZX
Tape
5

Fig. 6.8
13. Record Head Height and Azimuth Alignment
14. Record Level Calibration and Recording Bias Current

STEP	ITEM	SIGNAL SOURCE	OUTPUT CONNECTION	MODE	ADJUSTMENT	REMARKS
12	Bias Trap Adjustment (Playback Amp.)	Remove input signals	VTVM to L41, R43 on the Main P.C.B.	Record, Pause Monitor SW – Tape Tape SW – ZX Eq. SW – 70 μs Dolby NR SW – OFF	Main P.C.B. L104, L204	Adjust L104 (L204) to obtain the minimum reading on the VTVM.
13	Record Head Height Adjustment and Azimuth Alignment	Test Tone 400 Hz and 15 kHz	VTVM to Output Jacks	Record, Playback Monitor SW – Tape Tape SW – SX Eq. SW – 70 μs Test Tone SW – 400/15 k Dolby NR SW – OFF	RH Height Gear Record Head Azimuth Alignment Screw Rec. Cal. P.C.B. (Level) VR702, VR802 (Bias) VR705, VR805	1. Record Head Height Adjustment: a. Set the Test Tone switch to 400 Hz. Record signals on a reference SX tape (DA09025A), and then play it back. b. Adjust Rec. Cal. VR702 (VR802) and Bias Cal. VR705 (VR805) to the center position. c. Adjust the RH Height Gear to obtain maximum reading of both channels on the VTVM. 2. Record Head Azimuth Alignment: a. Set the Test Tone switch to 15 kHz. Record signals on the reference SX tape (DA09025A), and then play it back. b. Adjust the Record Head Azimuth Alignment Screw to obtain maximum readings of both channels on the VTVM. c. Repeat 1 and 2 one or two times to obtain optimum performance.
14	Record Level Calibration and Recording Bias Current Adjustment	Test Tone 400 Hz and 15 kHz and 10 kHz and 20 kHz (–20 dB) to Input Jacks	VTVM and Distortion Meter to Output Jacks	Record, Playback Monitor SW – Tape Tape SW – ZX/SX/EX Eq. SW – 70 μs (ZX/SX) 120 μs (EX) Test Tone SW – 400/15 k Dolby NR SW – C-Type/OFF/B-Type MPX SW – OUT	Rec. Cal. P.C.B. (Level) ZX: VR701, VR801 SX: VR702, VR802 EX: VR703, VR803 (Bias) ZX: VR706, VR806 SX: VR705, VR805 EX: VR704, VR804	Adjustment should be made in the order of ZX, SX and EX. 1. Load a reference ZX tape (DA09037A), reference SX tape (DA09025A) and reference EXII tape (DA09066A). Set the Dolby NR switch to C-Type. 2. Adjust Rec. Cal. VR701 (VR801) for ZX, VR702 (VR802) for SX and VR703 (VR803) for EXII to the center position. 3. Adjust Bias Cal. VR706 (VR806) for ZX, VR705 (VR805) for SX and VR704 (VR804) for EXII to the center position. 4. Set the Test Tone switch to 15 kHz, then record and play it back. Adjust Bias VR706 (VR806), VR705 (VR805) and VR704 (VR804) to obtain 0 dB on the level meters. 5. Set the Test Tone switch to 400 Hz. Adjust Rec. Cal. VR701 (VR801), VR702 (VR802) and VR703 (VR803) to obtain 0 dB on the level meters. 6. Repeat 4 and 5 as above two or three times to obtain optimum performance. 7. Set the Dolby NR switch to OFF. 8. Feed in 10 kHz (–20 dB) and 20 kHz (–20 dB), then record and play them back. Check to insure that the levels are within –20 dB ±3 dB against the levels in Dolby NR C-Type. 9. Set the Dolby NR switch to B-Type. 10. Feed in 10 kHz (–20 dB) and 20 kHz (–20 dB), then record and play them back. Check to insure that the levels are within –20 dB ±2 dB against the levels in Dolby NR OFF. 11. Check to insure whether the total harmonic distortion is less than 0.8% for ZX tape and 1.0% for SX and EXII tapes.
15	Overall Frequency Response Adjustment	400 Hz (0 dB) and 20 Hz to 20 kHz (–20 dB) to Input Jacks	VTVM to Output Jacks	Record, Playback Monitor SW – Source/Tape Tape SW – ZX/SX/EX Eq. SW – 70 μs (ZX/SX) 120 μs (EX) Test Tone SW – OFF Dolby NR SW – OFF MPX SW – OUT	Main P.C.B. L105, L205	1. Set the Monitor switch to Source. 2. Feed in 400 Hz (0 dB) and adjust the Input Level control to obtain 0 dB on the level meters. 3. Switch the Generator output level to –20 dB. 4. Set the Monitor switch to Tape, then record and play it back. 5. Feed in 20 Hz to 20 kHz (–20 dB), and check to insure if the output levels are within –20 dB ±3 dB. 6. If above is not sufficient, adjust L105 (L205) to obtain approx. –20 dB on the VTVM. 7. Conduct step 14 "Record Level Calibration and Recording Bias Current Adjustment". 8. If above is not sufficient, precise re-adjustment of step 8 "Playback Frequency Response", replacement of Playback Head or Record Head, check on item 4.10 "Tape Travelling Adjustment" or frequency response adjustment according to item 6.2 will be required.
16	Crosstalk Measurement	1 kHz to Input Jacks	1 kHz Band Pass Filter and VTVM to Output Jacks	Record and Playback Monitor SW – Tape Tape SW – ZX Eq. SW – 70 μs Dolby NR SW – OFF		1. Erase a reference ZX tape with bulk eraser. 2. Adjust the Input Level control to obtain 0 dB on the VTVM, and record the signals on the reference tape. 3. Turn the cassette tape the other way round and play it back. 4. Measure the difference between 2 and 3.

STEP	ITEM	SIGNAL SOURCE	OUTPUT CONNECTION	MODE	ADJUSTMENT	REMARKS
17	Channel Separation Measurement	1 kHz to Input Jacks	1 kHz Band Pass Filter and VTVM to Output Jacks	Record and Playback Monitor SW – Tape Tape SW – ZX Eq. SW – 70 μs Dolby NR SW – OFF		1. Erase a reference ZX tape with bulk eraser. 2. Adjust the Input Level control to obtain 0 dB on the VTVM, and turn the Balance control fully clockwise (counterclockwise). 3. Record and Play it back, then measure the R ch (L ch) level.
18	Erasure Measurement	1 kHz to Input Jacks	1 kHz Band Pass Filter and VTVM to Output Jacks	Record and Playback Monitor SW – Tape Tape SW – ZX Eq. SW – 70 μs Dolby NR SW – OFF		1. Erase a reference ZX tape with bulk eraser. 2. Adjust the Input Level control to obtain 0 dB on the VTVT, and record the signals on the reference tape. 3. Rewind the tape then close the Input Level control. 4. Record and play it back, then measure the difference between 2 and 3.
19	Signal to Noise Ratio Measurement	400 Hz to Input Jacks	VTVM and Distortion Meter to Output Jacks	Record and Playback Monitor SW – Tape Tape SW – ZX Eq. SW – 70 μs Dolby NR SW – B-Type/C-Type		Perform the following measurement for both Dolby NR B-Type and C-Type. 1. Feed in 400 Hz and record, and play it back. 2. Adjust the Input Level control to obtain 3% total harmonic distortion in Playback mode. 3. Close the Input Level control, then record. 4. After rewound, play back and check the output level difference between 2 and 3. Note: The filter of IHF-A curve shall be used in the measurements.
20	Total Harmonic Distortion Measurement	400 Hz to Input Jacks	Distortion Meter to Output Jacks	Record and Playback Monitor SW – Tape Tape SW – ZX/SX/EX Eq. SW – 70 μs (ZX/SX) 120 μs (EX) Dolby NR SW – OFF		1. Adjust the Input Level control to obtain 0 dB on the VTVM. 2. Record and play it back. 3. Read the distortion meter and check to insure that the distortion is less than 0.8% for ZX tape and 1.0% for SX and EXII tapes.
21	Wow/Flutter Measurement	3 kHz Speed and Wow/ Flutter Tape (DA09006A)	Wow/Flutter Meter to Output Jacks	Playback Monitor SW – Tape Eq. SW – 70 μs		Play back and read the wow/flutter meter.

6.2. Frequency Response Adjustment

6.2.1. Playback Frequency Response Adjustment

Fig. 6.9 is the circuit for adjustment and Fig. 6.10 shows the playback equalization curve.

(1) Level Adjustment (for middle frequency response)

This adjustment will be required if playback level is not sufficient when 10 kHz PB frequency response tape is played back as referred to step 8 in 6.1 "Adjustment and Measurement Instructions".

Playback equalization level can be varied by the modification of R120 (R220) and R121 (R221).

Following are the details for the level modifications:

Approx. +1 dB .... R121 (R221): 3.0 k
R120 (R220): 4.3 k
0 dB .... R121 (R221): 3.3 k
R120 (R220): 4.7 k
Approx. –1 dB .... R121 (R221): 3.6 k
R120 (R220): 5.1 k

(2) Peaking Adjustment (for high frequency response)

This adjustment will be required if playback level is not sufficient when 20 kHz PB frequency response tape is played back as referred to step 8 in 6.1 "Adjustment and Measurement Instructions".

Peaking portion compensates the gap loss of the playback head. Peaking level is varied by the short circuit of R127 (R227) or R128 (R228) as illustrated in Fig. 6.10.

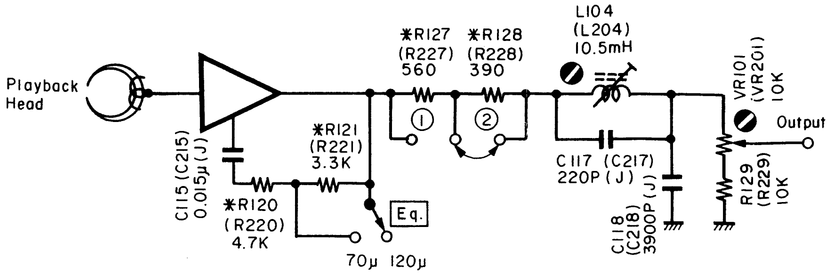


Fig. 6.9 Playback Amp.

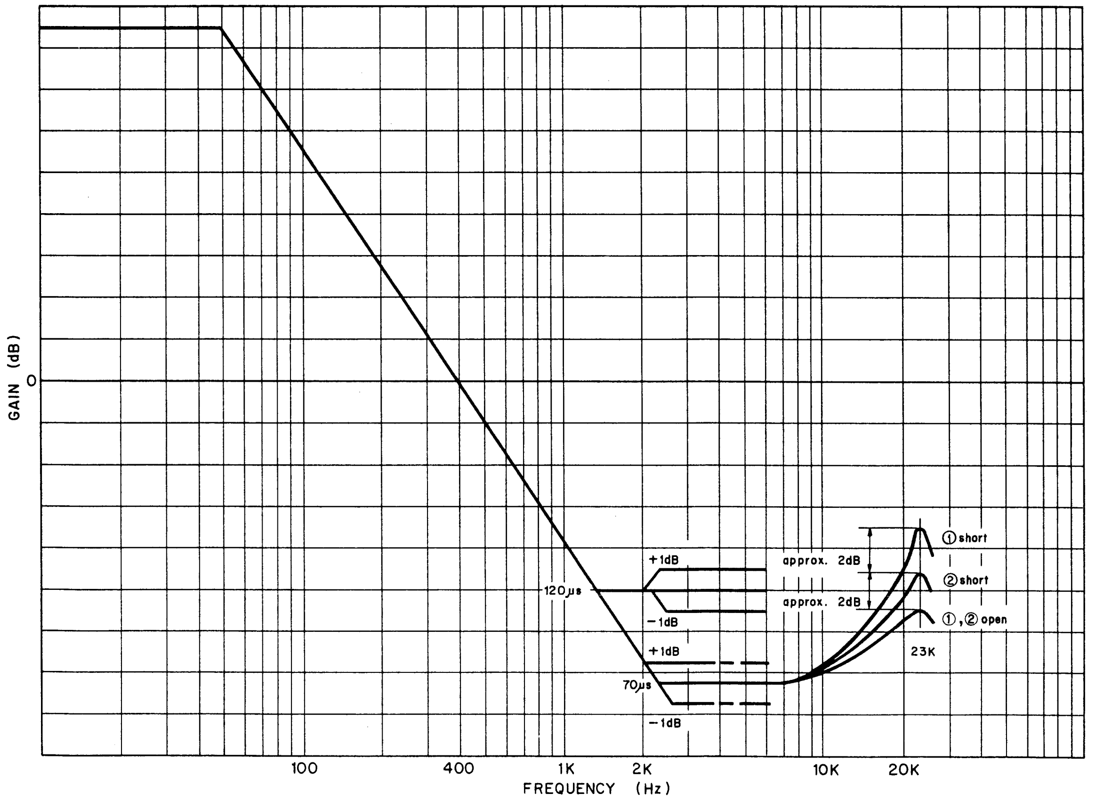


Fig. 6.10 Playback Equalization Curve

6.2.2. Record Current Frequency Response Adjustment

Record eq. peaking is adjusted for compensating the overall frequency response when playback frequency response is completed.

Normally however, peaking frequency is pre-adjusted to approx. 23 kHz in Record mode. Refer to Fig. 6.11.

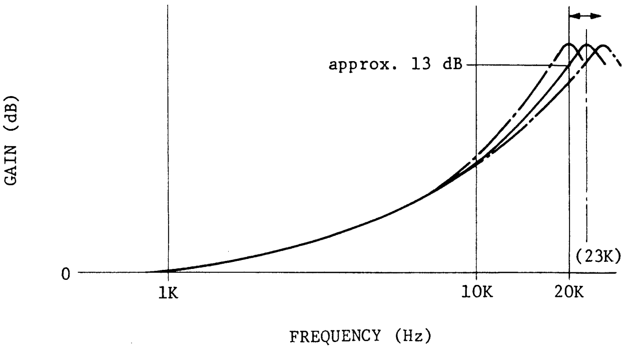


Fig. 6.11 Recording Peaking Curve

(1) For ZX Tape

(a) Feed in 400 Hz (0 dB), then record and play it back. Adjust bias current by VR706 (VR806) on the Rec. Cal. P.C.B. Ass'y to obtain a 0.8% distortion.

(b) Feed in 10 kHz and 400 Hz (−20 dB) then record and play it back. Check the difference of the levels between 10 kHz and 400 Hz, and mount an additional capacitor in parallel with C121 (C221) from the dip side of the Main P.C.B. Ass'y depending upon the difference of the levels against 400 Hz.
Refer to Fig. 6.12.

Level Difference	Addition	Total
0 dB	0	680 pF
−1 dB	470 pF	1150 pF
−2 dB	1000 pF	1680 pF

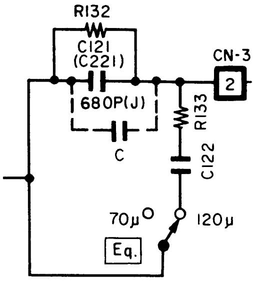


Fig. 6.12

(c) Feed in 20 kHz (−20 dB), then record and play it back. Adjust record peaking coil L105 (L205) on the Main P.C.B. Ass'y to obtain flat overall frequency response.

(2) For SX Tape

(a) Feed in 15 kHz and 400 Hz (−20 dB), then record and play it back.
Adjust bias current by VR705 (VR805) on the Rec. Cal. P.C.B. Ass'y to obtain flat overall frequency response.

(b) Feed in 20 kHz and 400 Hz (−20 dB), then record and play it back.
Check to insure that the overall frequency response is flat.

(3) For EXII Tape

(a) Feed in 15 kHz and 400 Hz (−20 dB), then record and play it back.
Adjust bias current by VR704 (VR804) on the Rec. Cal. P.C.B. Ass'y to obtain flat overall frequency response.

(b) Feed in 20 kHz and 400 Hz (−20 dB), then record and play it back.
Check to insure that the overall frequency response is flat.

6.3. Dolby NR Circuit Check

Dolby NR circuit incorporates Dolby NR ICs (μA7300PC) which have no adjustment point.
Perform the following checks and make sure that the IC operates accurately, i.e., accuracy of frequency response through IC.

6.3.1. Serial No.: A12102102 –

(1) Dolby NR B-Type Circuit Check

(a) Playback Dolby NR Circuit

Signal Source: 1.4 kHz to pin No. M (S) on Dolby NR P.C.B.
Output Connection: VTVM to test point TP101 (TP201) on Main P.C.B.
Mode: Stop
Monitor SW – Tape
Dolby NR SW – B-Type/OFF

1) Connect a VTVM to TP101 (TP201) on the Main P.C.B. Ass'y.
2) Set the Dolby NR switch to B-Type.
Feed in 1.4 kHz to pin No. M (S) and adjust the generator output control to obtain 9 mV on the VTVM.
3) Set the Dolby NR switch to OFF.
Check to insure that the reading is +3.2 dB ±1.5 dB on the VTVM.

(b) Record Dolby NR Circuit

Signal Source: 1.4 kHz to Input Jacks
Output Connection: VTVM to test point TP101 (TP201) on Main P.C.B., and IC102-16 (IC202-16) on Dolby NR P.C.B.
Mode: Stop
Monitor SW – Source
Dolby NR SW – B-Type/OFF

1) Connect a VTVM to TP101 (TP201) on the Main P.C.B. Ass'y.
2) Feed in 1.4 kHz and adjust the Input Level control to obtain 9 mV/2.85 mV on the VTVM.
3) Remove the VTVM from TP101 (TP201) and reconnect it to IC102-16 (IC202-16) on the Dolby NR P.C.B. Ass'y.
4) Check to insure that the reading at IC102-16 (IC202-16) corresponds to the following with Dolby NR switch OFF and B-Type.

Input Level at TP101 (TP201)	Level at IC102-16 (IC202-16)	
	Dolby NR OFF	Dolby NR B-Type
9 mV	0 dB	+3.2 dB ±1.5 dB
2.85 mV	0 dB	+8.2 dB ±1.5 dB

(2) Dolby NR C-Type Circuit Check

(a) Playback Dolby NR Circuit

Signal Source: 1.4 kHz to pin No. M (S) on Dolby NR P.C.B.
Output Connection: VTVM to test point TP101 (TP201) on Main P.C.B.
Mode: Stop
Monitor SW – Tape
Dolby NR SW – C-Type/OFF

1) Connect a VTVM to TP101 (TP201) on the Main P.C.B. Ass'y.
2) Set the Dolby NR switch to C-Type.
Feed in 1.4 kHz to pin No. M (S) and adjust the generator output control to obtain 9 mV on the VTVM.
3) Set the Dolby NR switch to OFF.
Check to insure that the reading is +6.5 dB ±1.5 dB on the VTVM.

(b) Record Dolby NR Circuit

Signal Source: 1.4 kHz to Input Jacks
Output Connection: VTVM to test point TP101 (TP201) on Main P.C.B., and IC102-16 (IC202-16) on Dolby NR P.C.B.
Mode: Stop
Monitor SW – Source
Dolby NR SW – C-Type/OFF

1) Connect a VTVM to TP101 (TP201) on the Main P.C.B. Ass'y.
2) Feed in 1.4 kHz and adjust the Input Level control to obtain 9 mV/2.85 mV on the VTVM.
3) Remove the VTVM from TP101 (TP201) and reconnect it to IC102-16 (IC202-16) on the Dolby NR P.C.B. Ass'y.
4) Check to insure that the reading at IC102-16 (IC202-16) corresponds to the following with Dolby NR switch OFF and C-Type.

Input Level at TP101 (TP201)	Level at IC102-16 (IC202-16)	
	Dolby NR OFF	Dolby NR C-Type
9 mV	0 dB	+6.5 dB ±1.5 dB
2.85 mV	0 dB	+11.4 dB ±1.5 dB

6.3.2. Serial Nos.: A12101001 – A12102101

(1) Dolby NR B-Type Circuit Check

(a) Playback Dolby NR Circuit

Signal Source:	1.4 kHz to negative side of C164 (C264) on Playback Dolby NR P.C.B. (positive side is connected to IC152-9 (IC-252-9)).
Output Connection:	VTVM to test point TP101 (TP201) on Main P.C.B.
Mode:	Stop Monitor SW – Tape Dolby NR SW – B-Type/OFF

1) Connect a VTVM to TP101 (TP201) on the Main P.C.B. Ass'y.
2) Set the Dolby NR switch to B-Type.
   Feed in 1.4 kHz and adjust the generator output control to obtain 9 mV on the VTVM.
3) Set the Dolby NR switch to OFF.
   Check to insure that the reading is +3.2 dB ±1.5 dB on the VTVM.

(b) Record Dolby NR Circuit

Signal Source:	1.4 kHz to Input Jacks
Output Connection:	VTVM to test point TP101 (TP201) on Main P.C.B., and IC102-16 (IC202-16) on Record Dolby NR P.C.B.
Mode:	Stop Monitor SW – Source Dolby NR SW – B-Type/OFF

1) Connect a VTVM to TP101 (TP201) on the Main P.C.B. Ass'y.
2) Feed in 1.4 kHz and adjust the Input Level control to obtain 9 mV/2.85 mV on the VTVM.
3) Remove the VTVM from TP101 (TP201) and reconnect it to IC102-16 (IC202-16) on the Record Dolby NR P.C.B. Ass'y.
4) Check to insure that the reading at IC102-16 (IC202-16) corresponds to the following with Dolby NR switch OFF and B-Type.

Input Level at TP101 (TP201)	Level at IC102-16 (IC202-16)	
	Dolby NR OFF	Dolby NR B-Type
9 mV	0 dB	+3.2 dB ±1.5 dB
2.85 mV	0 dB	+8.2 dB ±1.5 dB

(2) Dolby NR C-Type Circuit Check

(a) Playback Dolby NR Circuit

Signal Source:	1.4 kHz to negative side of C164 (C264) on Playback Dolby NR P.C.B. (positive side is connected to IC152-9 (IC-252-9)).
Output Connection:	VTVM to test point TP101 (TP201) on Main P.C.B.
Mode:	Stop Monitor SW – Tape Dolby NR SW – C-Type/OFF

1) Connect a VTVM to TP101 (TP201) on the Main P.C.B. Ass'y.
2) Set the Dolby NR switch to C-Type.
   Feed in 1.4 kHz and adjust the generator output control to obtain 9 mV on the VTVM.
3) Set the Dolby NR switch to OFF.
   Check to insure that the reading is +6.5 dB ±1.5 dB on the VTVM.

(b) Record Dolby NR Circuit

Signal Source:	1.4 kHz to Input Jacks
Output Connection:	VTVM to test point TP101 (TP201) on Main P.C.B., and IC102-16 (IC202-16) on Record Dolby NR P.C.B.
Mode:	Stop Monitor SW – Source Dolby NR SW – C-Type/OFF

1) Connect a VTVM to TP101 (TP201) on the Main P.C.B. Ass'y.
2) Feed in 1.4 kHz and adjust the Input Level control to obtain 9 mV/2.85 mV on the VTVM.
3) Remove the VTVM from TP101 (TP201) and reconnect it to IC102-16 (IC202-16) on the Record Dolby NR P.C.B. Ass'y.
4) Check to insure that the reading at IC102-16 (IC202-16) corresponds to the following with Dolby NR switch OFF and C-Type.

Input Level at TP101 (TP201)	Level at IC102-16 (IC202-16)	
	Dolby NR OFF	Dolby NR C-Type
9 mV	0 dB	+6.5 dB ±1.5 dB
2.85 mV	0 dB	+11.4 dB ±1.5 dB

7. MOUNTING DIAGRAMS AND PARTS LIST

Schematic Ref. No.	Part No.	Description
	BA03976B	**Control Switch P.C.B. Ass'y**
	0B07798B	Control Switch P.C.B.
R605,606 607	0B09049A	Fail Safe Type Resistor 22 RDF-25S J
PL601,602 603,604 605,606	0B08552A	Lamp 12V 25mA
SW601,602 603,604 605,606	0B07254A	Push Switch
	0B08567B	Lamp Holder (6 pcs.)
	BA04400A	**Volume P.C.B. Ass'y**
	0B07954A	Volume P.C.B.
VR001	0B07231A	Volume 100K (A) x 2
VR002	0B07230A	Volume 10K (A) x 2
VR003	0B07366A	Volume 250K (MN)
FC1	0B05235A	7P Flat Cable
	0J03973B	Volume Holder (1 pce.)
	BA04312A	**Indicator P.C.B. Ass'y**
	0B07928B	Indicator P.C.B.
IC901	0B06284A	IC MSL9350RS
Q901	0B06066A	Transistor 2SD471
Q902,903 904,905	0B06013A	Transistor 2SA733
ZD901	0B06268A	Zener Diode 5.6V RD5.6EB3
R901	0B09378A	Fail Safe Type Resistor 22 RSF-1B J
R902,903 904,905	0B05576A	Carbon Resistor 470 ERD-25T J
R906-913	0B01704A	Carbon Resistor 68 ERD-25T J (8 pcs.)
R914	0B05622A	Carbon Resistor 2.2K ERD-25T J
R915	0B09263A	Carbon Resistor 12K ERD-25T J
C901	0B01400A	Electrolytic Capacitor 100μ 16V
C902	0B01836A	Electrolytic Capacitor 47μ 10V
C903	0B01780A	Mylar Capacitor 0.1μ 50V J
FC901	0B05236A	8P Flat Cable
FC902	0B05251A	8P Flat Cable 80mm
FC903	0B05252A	4P Flat Cable 35mm
CN8	0B08848C	7P-H Connector
	0B06291A	Indicator SEL8806N (1 pce.)
	BA03974A	**Lamp P.C.B. Ass'y**
	0B07801A	Lamp P.C.B.
PL001,002 003	0B08553A	Lamp 14V 80mA
CN1	0B08575A	3P-H Connector
	BA04370A	**Pin Jack P.C.B. Ass'y**
	0B07955A	Pin Jack P.C.B.
FC2	0B05226A	5P Flat Cable
	0B08709A	Jack Unit (1 pce.)
	0E00037A	Earth Lug B-5 (1 pce.)
	BA04070A	**Shut-off P.C.B. Ass'y**
	0B07839B	Shut-off P.C.B.
Q449	0B01872A	Transistor 2SC945 (L)
Q450	0B06228A	Photo Transistor PH104
D470	0B06181A	Silicon Diode 1SS53
R603	0B05671A	Carbon Resistor 2.2M ERD-25T J
R604	0B05615A	Carbon Resistor 22K ERD-25T J
R605	0B09215A	Fail Safe Type Resistor 100 RDF-25S J
R606	0B01888A	Carbon Resistor 10K ERD-25T J
C453	0B01405A	Electrolytic Capacitor 1μ 50V
PL407	0B08552A	Lamp 12V 25mA
	BA04402A	**MPX Filter Switch P.C.B. Ass'y**
	0B07956A	MPX Filter Switch P.C.B.
R107,207	0B05776A	Carbon Resistor 1M ERD-25T J
C105,205	0B01804A	Mylar Capacitor 3900P 50V J
SW307	0B07369A	Slide Switch 22S SSB022
	BA04401A	**Record Cal. P.C.B. Ass'y**
	0B07813D	Record Cal. P.C.B.
VR701,705 801,805	0B07270A	Semi-fixed Volume 20K
VR702,703 706,802 803,806	0B07256A	Semi-fixed Volume 10K
VR704,804	0B07269A	Semi-fixed Volume 50K
R701,702 801,802	0B09263A	Carbon Resistor 12K ERD-25T J
R703,803	0B01856A	Carbon Resistor 8.2K ERD-25T J
R704,804	0B01887A	Carbon Resistor 5.6K ERD-25T J
R705,706 805,806	0B01846A	Carbon Resistor 4.7K ERD-25T J
R707,807	0B01681A	Carbon Resistor 3.3K ERD-25T J
C702,802	0B05652A	Mylar Capacitor 4700P 50V J
C703,803	0B05778A	Mylar Capacitor 0.056μ 50V K
CN3	0B08869A	9P-H Connector
CN4	0B08868A	8P-H Connector

Note: Mounting diagram shows a dip side view of the printed circuit board.

7.1. Control Switch P.C.B. Ass'y

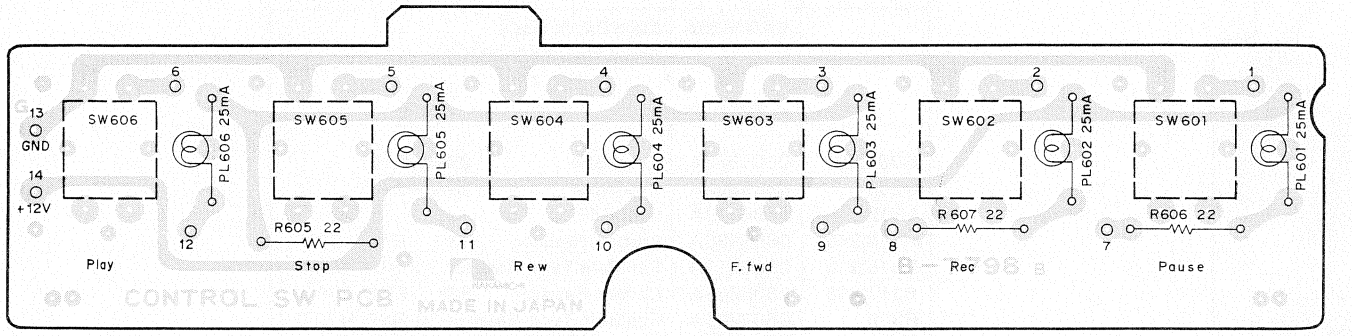

SW606
SW605
SW604
SW603
SW602
SW601
PL606 25mA
PL605 25mA
PL604 25mA
PL603 25mA
PL602 25mA
PL601 25mA
R605 22
R607 22
R606 22
13
GND
14
+12V
Play
Stop
Rew
F.fwd
Rec
Pause
CONTROL SW PCB
MADE IN JAPAN

Fig. 7.1

7.5. Pin Jack P.C.B. Ass'y

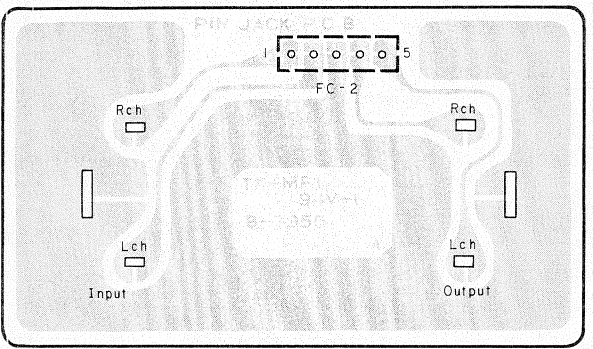

PIN JACK P.C.B
FC-2
Rch
Lch
Input
Output
TK-MFI
94V-I
B-7955

Fig. 7.5

7.6. Shut-off P.C.B. Ass'y

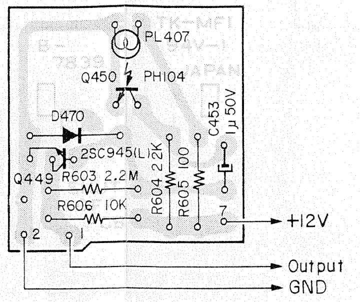

PL407
Q450
PH104
D470
2SC945(L)
Q449
R603 2.2M
R606 10K
R604 22K
R605 100
C453 1μ 50V
+12V
Output
GND

Fig. 7.6

Note: Diode is 1SS53 unless otherwise specified.

7.2. Volume P.C.B. Ass'y

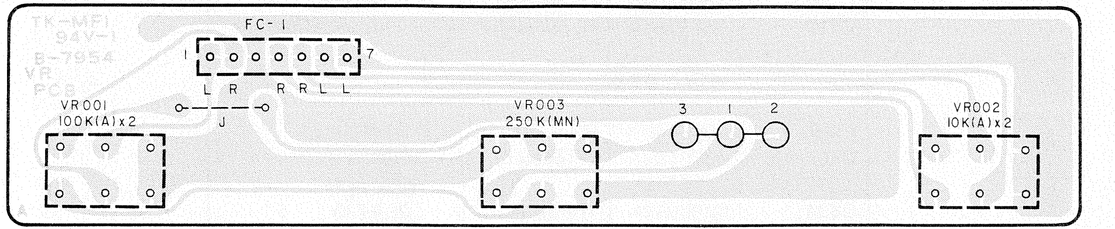

FC-1
TK-MFI
94V-I
B-7954
VR.
PCB
VR001
100K(A)x2
VR003
250K(MN)
VR002
10K(A)x2
L R R R L L
J

Fig. 7.2

7.3. Indicator P.C.B. Ass'y

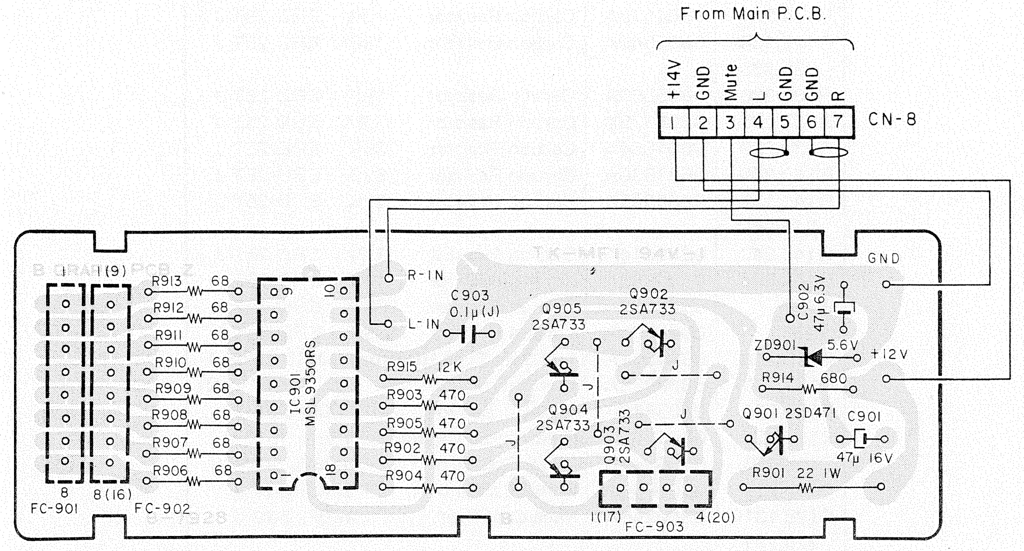

From Main P.C.B.
+14V
GND
Mute
L
GND
GND
R
1 2 3 4 5 6 7
CN-8
R-IN
L-IN
GND
+12V
R913 68
R912 68
R911 68
R910 68
R909 68
R908 68
R907 68
R906 68
IC901
MSL9350RS
C903 0.1μ(J)
Q905 2SA733
Q902 2SA733
Q904 2SA733
Q903 2SA733
Q901 2SD471
C902 47μ 6.3V
ZD901 5.6V
R914 680
R915 12K
R903 470
R905 470
R902 470
R904 470
C901 47μ 16V
R901 22 1W
FC-901
FC-902
FC-903
TK-MFI 94V-I

Fig. 7.3

7.7. MPX Filter Switch P.C.B. Ass'y

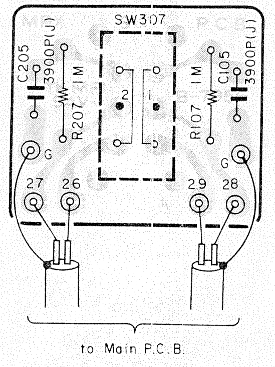

SW307
C205 3900P(J)
R207 1M
R107 1M
C105 3900P(J)
27
26
29
28
to Main P.C.B.

Fig. 7.7

7.8. Record Cal. P.C.B. Ass'y

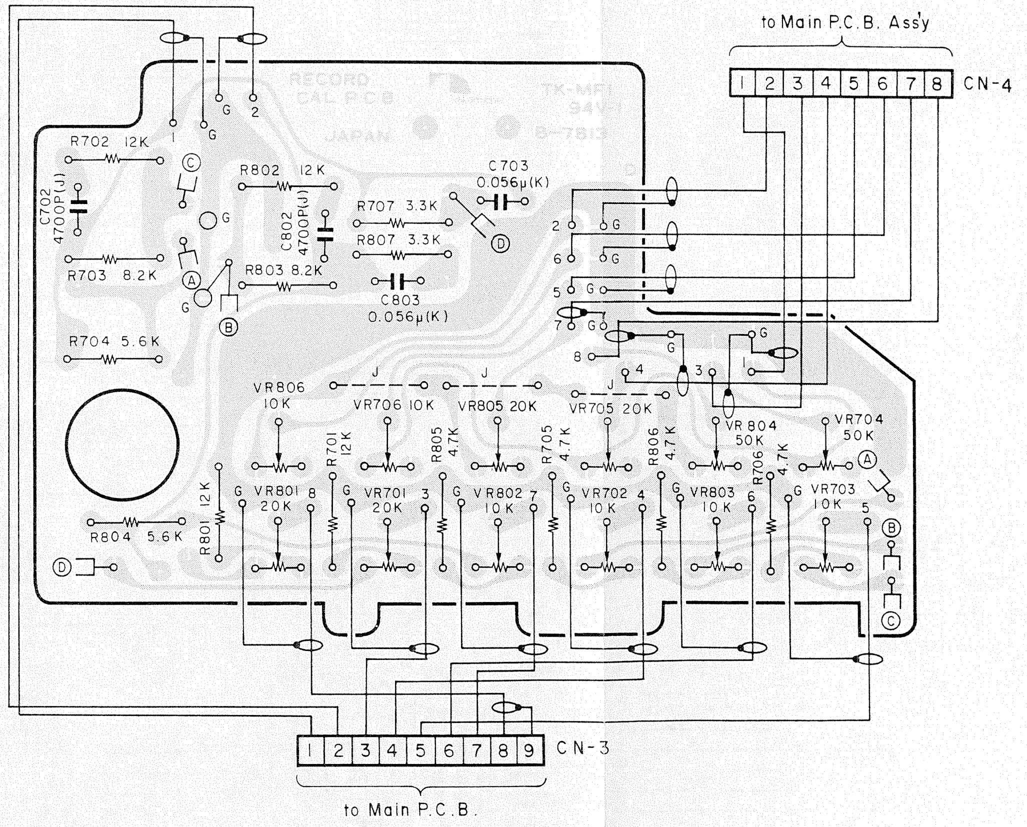

to Main P.C.B. Ass'y
1 2 3 4 5 6 7 8
CN-4
RECORD CAL P.C.B
TK-MFI
94V-I
B-7813
JAPAN
R702 12K
C702 4700P(J)
R703 8.2K
R704 5.6K
R802 12K
C802 4700P(J)
R707 3.3K
R807 3.3K
R803 8.2K
C703 0.056μ(K)
C803 0.056μ(K)
VR806 10K
VR706 10K
VR805 20K
VR705 20K
VR804 50K
VR704 50K
R701 12K
R805 4.7K
R705 4.7K
R806 4.7K
R706 4.7K
VR801 20K
VR701 20K
VR802 10K
VR702 10K
VR803 10K
VR703 10K
R801 12K
R804 5.6K
1 2 3 4 5 6 7 8 9
CN-3
to Main P.C.B.

Fig. 7.8

7.4. Lamp P.C.B. Ass'y

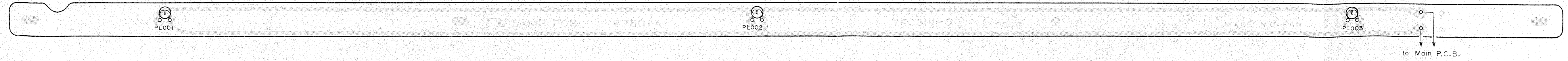
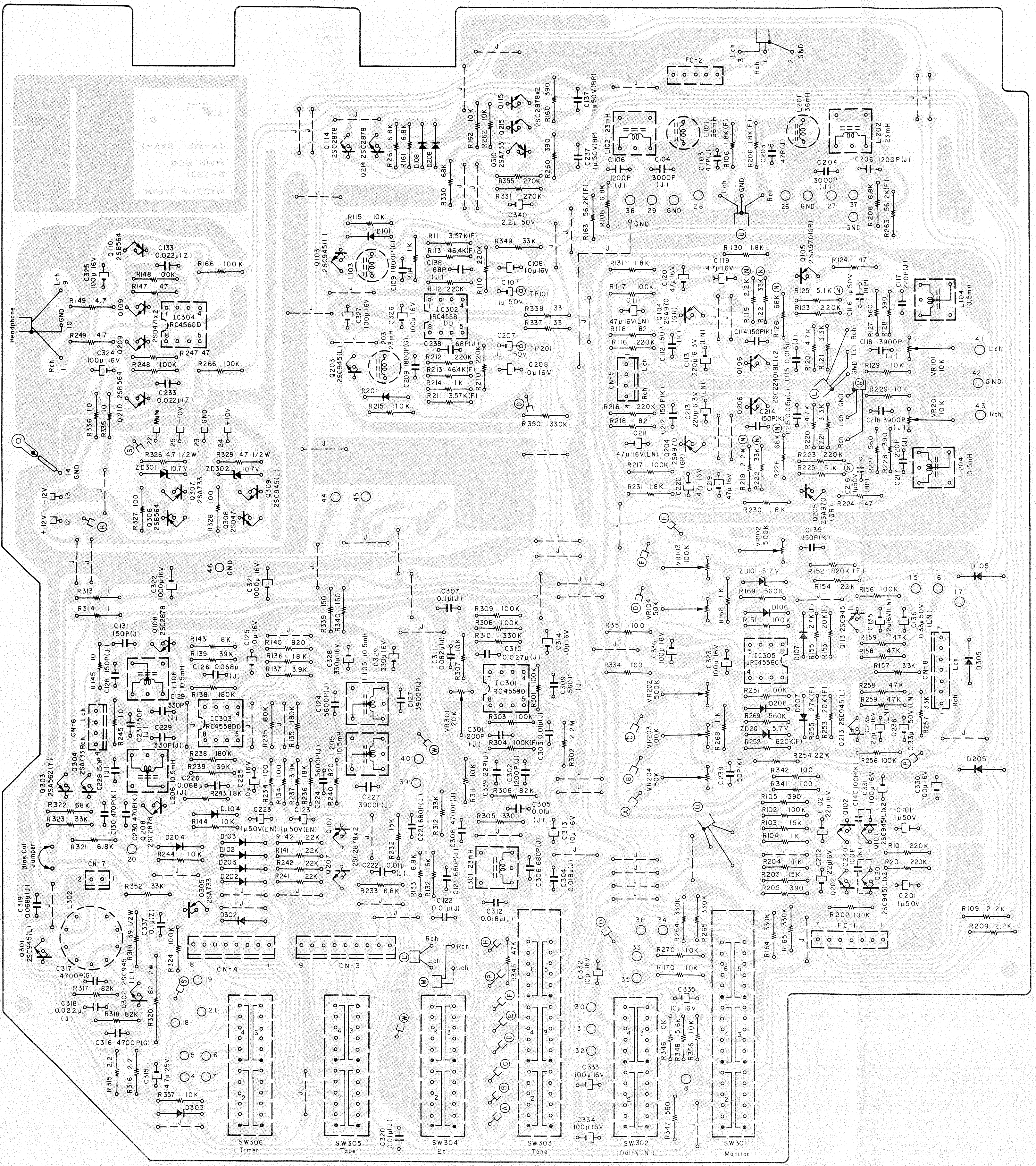

PL001
PL002
PL003
LAMP PCB
B7801 A
YKC3IV-0
MADE IN JAPAN
to Main P.C.B.

Fig. 7.4

7.9. Main P.C.B. Ass'y



SW306
Timer
SW305
Tape
SW304
Eq.
SW303
Tone
SW302
Dolby NR
SW301
Monitor
CN-4
CN-3
CN-5
CN-6
CN-7
CN-8
FC-1
FC-2
Headphone
Lch
Rch
GND
Bias Cut Jumper
IC301 RC4558D
IC302 RC4558 DD
IC303 RC4558DD
IC304 RC4560D
IC305 RC4556C
L302
VR101 10K
VR201 10K
VR102 500K
VR202 500K
VR103 100K
VR203 100K
VR104 50K
VR204 50K
VR301 20K
TP101
TP201
+12V
-12V
Mute
MADE IN JAPAN
MAIN PCB
TK-MFI BAY-I

Fig. 7.9.1 Serial No.: A12103654 –

Note: Diode is 1SS53 unless otherwise specified.

Schematic Ref. No.	Part No.	Description
	BA04520A	**Main P.C.B. Ass'y** Serial No.: A12103654 –
	– Bias Osc. –	
Q301,302	0B01872A	Transistor 2SC945 (L)
Q303	0B06202A	Transistor 2SA562 (Y)
L302	0B06613A	Osc. Coil
R145,245	0B05936A	Carbon Resistor 10 ERD-25T J
R315,316	0B09212A	Fail Safe Type Resistor 2.2 RDF-25S J
R317,318	0B05668A	Carbon Resistor 82K ERD-25T J
R319	0B09296A	Fail Safe Type Resistor 39 RSF-1/2B J
R320	0B09295A	Fail Safe Type Resistor 82 RSF-2B J
R321	0B01682A	Carbon Resistor 6.8K ERD-25T J
C130,230	0B09286A	Ceramic Capacitor 470P 50V K
C315	0B01402A	Electrolytic Capacitor 4.7μ 25V
C316,317	0B09191A	PP Capacitor 4700P 100V G
C318	0B09405A	PP Capacitor 0.022μ 100V J
C319	0B09254A	PP Capacitor 0.068μ 100V J
	– Rec. Amp. –	
IC303	0B06146A	IC RC4558DD
Q107,108	0B06299A	Transistor 2SC2878
207,208	(0B06070A)	(2SC1636)
Q304	0B06013A	Transistor 2SA733
D102,103 104,202 203,204 302	0B06181A	Silicon Diode 1SS53
L105,106 205,206	0B00068A	Trap Coil 10.5mH
R134,234	0B01679A	Carbon Resistor 100 ERD-25T J
R135,138 235,238	0B05640A	Carbon Resistor 180K ERD-25T J
R136,236	0B05560A	Carbon Resistor 18K ERD-25T J
R137,237	0B05675A	Carbon Resistor 3.9K ERD-25T J
R139,239	0B01854A	Carbon Resistor 39K ERD-25T J
R140,240	0B01680A	Carbon Resistor 820 ERD-25T J
R141,142 241,242	0B05615A	Carbon Resistor 22K ERD-25T J
R143,243	0B05614A	Carbon Resistor 1.8K ERD-25T J
R144,244	0B01888A	Carbon Resistor 10K ERD-25T J
R322	0B05692A	Carbon Resistor 68K ERD-25T J
R323	0B05509A	Carbon Resistor 33K ERD-25T J
R339,340	0B09213A	Fail Safe Type Resistor 150 RDF-25S J
C123,223	0B09223A	Electrolytic Capacitor 1μ 50V (LN)
C124,224	0B05659A	Mylar Capacitor 5600P 50V J
C125,225	0B01412A	Electrolytic Capacitor 10μ 16V
C126,226	0B05682A	Mylar Capacitor 0.068μ 50V J
C127,227	0B01804A	Mylar Capacitor 3900P 50V J
C128,131 228,231	0B09246A	Mica Capacitor 150P 50V J
C129,229	0B09322A	PP Capacitor 330P 100V J
C328,329	0B01502A	Electrolytic Capacitor 330μ 16V
	– PB Eq. Amp. –	
Q104,105 204,205	0B06180A	Transistor 2SA970 (GR)
Q106,206	0B06142A	Transistor 2SC2240 (BL)
L104,204	0B00068A	Trap Coil 10.5mH
VR101,201	0B07236A	Semi-fixed Volume 10K

Schematic Ref. No.	Part No.	Description
R116,123 216,223	0B05625A	Carbon Resistor 220K ERD-25T J
R117,217	0B01889A	Carbon Resistor 100K ERD-25T J
R118,218	0B05631A	Carbon Resistor 82 ERD-25T J
R119,219	0B09309A	Carbon Resistor 2.2K ERD-25TS J (Noiseless)
R120,220	0B01846A	Carbon Resistor 4.7K ERD-25T J
R121,221	0B01681A	Carbon Resistor 3.3K ERD-25T J
R122,222	0B09310A	Carbon Resistor 33K ERD-25TS J (Noiseless)
R124,224	0B01706A	Carbon Resistor 47 ERD-25T J
R125,225	0B09388A	Carbon Resistor 5.1K ERD-25TS J (Noiseless)
R126,226	0B09311A	Carbon Resistor 68K ERD-25TS J (Noiseless)
R127,227	0B05575A	Carbon Resistor 560 ERD-25T J
R128,228	0B05691A	Carbon Resistor 390 ERD-25T J
R129,229	0B01888A	Carbon Resistor 10K ERD-25T J
R130,131 230,231	0B05614A	Carbon Resistor 1.8K ERD-25T J
C111,211	0B09218A	Electrolytic Capacitor 47μ 16V (LN)
C112,114 212,214	0B09281A	Ceramic Capacitor 150P 50V K
C113,213	0B09151A	Electrolytic Capacitor 220μ 6.3V (LN)
C115,215	0B05557A	Mylar Capacitor 0.015μ 50V J
C116,216	0B09187A	Electrolytic Capacitor 1μ 50V (BP)
C117,217	0B09247A	Mica Capacitor 220P 50V J
C118,218	0B01804A	Mylar Capacitor 3900P 50V J
C119,120 219,220	0B01403A	Electrolytic Capacitor 47μ 16V
	— Headphone Amp. —	
IC304	0B06217A	IC RC4560D
Q109,209	0B06066A	Transistor 2SD471
Q110,210	0B06069A	Transistor 2SB564
R148,166 248,266	0B01889A	Carbon Resistor 100K ERD-25T J
R147,247	0B01706A	Carbon Resistor 47 ERD-25T J
R149,249	0B09321A	Fail Safe Type Resistor 4.7 RDF-25S J
R335,336	0B09216A	Fail Safe Type Resistor 10 RDF-25S J
C133,233	0B09291A	Ceramic Capacitor 0.022μ 50V Z
C324,325	0B01400A	Electrolytic Capacitor 100μ 16V
	— Meter Amp. —	
IC305	0B06216A	IC μPC4556C
Q113,213	0B01872A	Transistor 2SC945 (L)
ZD101,201	0B06304A	Zener Diode 5.7V XZ057
D105,106 107,205 206,207 305	0B06181A	Silicon Diode 1SS53
R151,156 251,256	0B01889A	Carbon Resistor 100K ERD-25T J
R152,252	0B09197A	Metal Film Resistor 820K SN14K2E F
R153,253	0B09439A	Metal Film Resistor 20K SN14K2E F
R154,254	0B05615A	Carbon Resistor 22K ERD-25T J
R155,255	0B09444A	Metal Film Resistor 27K SN14K2E F
R157,257	0B05509A	Carbon Resistor 33K ERD-25T J
R158,159 258,259 345	0B05641A	Carbon Resistor 47K ERD-25T J
R168,268	0B01857A	Carbon Resistor 1K ERD-25T J
R169,269	0B05784A	Carbon Resistor 560K ERD-25T J
R334,351	0B09215A	Fail Safe Type Resistor 100 RDF-25S J
C135,235	0B09137A	Electrolytic Capacitor 22μ 16V (LN)
C136,236	0B09327A	Electrolytic Capacitor 0.33μ 50V (LN)
C139,239	0B09281A	Ceramic Capacitor 150P 50V K
C323,336	0B01400A	Electrolytic Capacitor 100μ 16V
	— Line Amp. —	
IC302	0B06146A	IC RC4558DD
Q101,102 103,201 202,203 309	0B01872A	Transistor 2SC945 (L)
Q114,115 214,215	0B06299A (0B06070A)	Transistor 2SC2878 (2SC1636)
Q305,307 310	0B06013A	Transistor 2SA733
Q306	0B06069A	Transistor 2SB564
Q308	0B06066A	Transistor 2SD471
ZD301,302	0B06199A	Zener Diode 10.7V RD11EBB2
D101,108 201,208 303	0B06181A	Silicon Diode 1SS53
L101,201	0B03919B	Inductor 36mH
L102,202	0B03563A	19KHz Coil 23mH
L103,203	0B06676A	Inductor 36mH G
R101,110 112,201 210,212	0B05625A	Carbon Resistor 220K ERD-25T J
R102,202 324	0B01889A	Carbon Resistor 100K ERD-25T J
R103,132 203,232	0B01683A	Carbon Resistor 15K ERD-25T J
R104,114 204,214	0B01857A	Carbon Resistor 1K ERD-25T J
R105,160 205,260	0B05691A	Carbon Resistor 390 ERD-25T J
R106,206	0B09559A	Metal Film Resistor 1.8K SN14K2E F
R108,133 161,208 233,261	0B01682A	Carbon Resistor 6.8K ERD-25T J
R109,209	0B05622A	Carbon Resistor 2.2K ERD-25T J
R111,211	0B09507A	Metal Film Resistor 3.57K SN14K2E F
R113,213	0B09450A	Metal Film Resistor 46.4K SN14K2E F
R115,162 215,262	0B01888A	Carbon Resistor 10K ERD-25T J
R163,263	0B09595A	Metal Film Resistor 56.2K SN14K2E F
R313,314	0B09214A	Fail Safe Type Resistor 1 RDF-25S J
R326,329	0B09243A	Fail Safe Type Resistor 4.7 RSF-1/2B J
R327,328 341,342	0B09215A	Fail Safe Type Resistor 100 RDF-25S J
R330	0B05692A	Carbon Resistor 68K ERD-25T J
R331,355	0B05620A	Carbon Resistor 270K ERD-25T J
R337,338	0B09210A	Fail Safe Type Resistor 33 RDF-25S J
R352	0B05509A	Carbon Resistor 33K ERD-25T J
C101,107 201,207	0B01405A	Electrolytic Capacitor 1μ 50V
C102,202	0B01862A	Electrolytic Capacitor 22μ 16V
C103,203	0B09242A	Mica Capacitor 47P 50V J
C104,204	0B09262A	PP Capacitor 3000P 100V J
C106,206	0B05687A	Mylar Capacitor 1200P 50V J
C108,208	0B01412A	Electrolytic Capacitor 10μ 16V
C109,209	0B09409A	PP Capacitor 1800P 100V G
C121,221	0B09235A	PP Capacitor 680P 100V J
C122,222 320	0B05681A	Mylar Capacitor 0.01μ 50V J
C137,237	0B09187A	Electrolytic Capacitor 1μ 50V (BP)
C138,238	0B09393A	Ceramic Capacitor 68P 50V J
C140,240	0B09282A	Ceramic Capacitor 100P 50V K
C321,322	0B01397A	Electrolytic Capacitor 1000μ 16V
C326,327 330,331	0B01400A	Electrolytic Capacitor 100μ 16V
C337	0B09292A	Ceramic Capacitor 0.1μ 50V Z
C340	0B09372A	Electrolytic Capacitor 2.2μ 50V
	— Tone Osc. —	
IC301	0B06124B	IC RC4558D
L301	0B03563A	19KHz Coil 23mH
VR301	0B09093A	Semi-fixed Volume 20K
R301,303 308,309	0B01889A	Carbon Resistor 100K ERD-25T J
R302	0B05671A	Carbon Resistor 2.2M ERD-25T J
R304	0B09305A	Metal Film Resistor 100K SN14K2E F
R305	0B05577A	Carbon Resistor 330 ERD-25T J
R306	0B05668A	Carbon Resistor 82K ERD-25T J
R307,311	0B01888A	Carbon Resistor 10K ERD-25T J
R310	0B05627A	Carbon Resistor 330K ERD-25T J
R312	0B05509A	Carbon Resistor 33K ERD-25T J
C301	0B09275A	Mica Capacitor 200P 50V J
C302	0B05687A	Mylar Capacitor 1200P 50V J
C303,305	0B05681A	Mylar Capacitor 0.01μ 50V J
C304,312	0B05832A	Mylar Capacitor 0.018μ 50V J
C306	0B09235A	PP Capacitor 680P 100V J
C307	0B01780A	Mylar Capacitor 0.1μ 50V J
C308	0B05652A	Mylar Capacitor 4700P 50V J
C309	0B09323A	PP Capacitor 560P 100V J
C310	0B09045A	Mylar Capacitor 0.027μ 50V J
C311	0B05685A	Mylar Capacitor 0.082μ 50V J
C313,314	0B01412A	Electrolytic Capacitor 10μ 16V
C339	0B09279A	Ceramic Capacitor 22P 50V J
	— Miscellaneous —	
	0B07931D	Main P.C.B.
VR102,202	0B09107A	Semi-fixed Volume 500K
VR103,203	0B03832A	Semi-fixed Volume 100K
VR104,204	0B07228A	Semi-fixed Volume 50K
R164,165 264,265 350	0B05627A	Carbon Resistor 330K ERD-25T J
R170,270 346,356 357	0B01888A	Carbon Resistor 10K ERD-25T J
R347	0B05575A	Carbon Resistor 560 ERD-25T J
R348	0B01887A	Carbon Resistor 5.6K ERD-25T J
R349	0B05509A	Carbon Resistor 33K ERD-25T J
C332,335	0B01674A	Electrolytic Capacitor 10μ 16V
C333,334	0B01272A	Electrolytic Capacitor 100μ 16V
SW301	0B07365A	Rotary Switch 62N
SW302,305	0B07358A	Rotary Switch 43S
SW303	0B07359A	Rotary Switch 63S
SW304	0B07356A	Rotary Switch 42N
SW306	0B07357A	Rotary Switch 44S
CN3	0B08645A	9P-T Post
CN4	0B08644A	8P-T Post
CN5,6	0B08654A	4P-T Post
CN7	0B08656A	2P-T Post
CN8	0B08643A	7P-T Post
	0J04450A	Osc. Coil Cap (1 pce.)

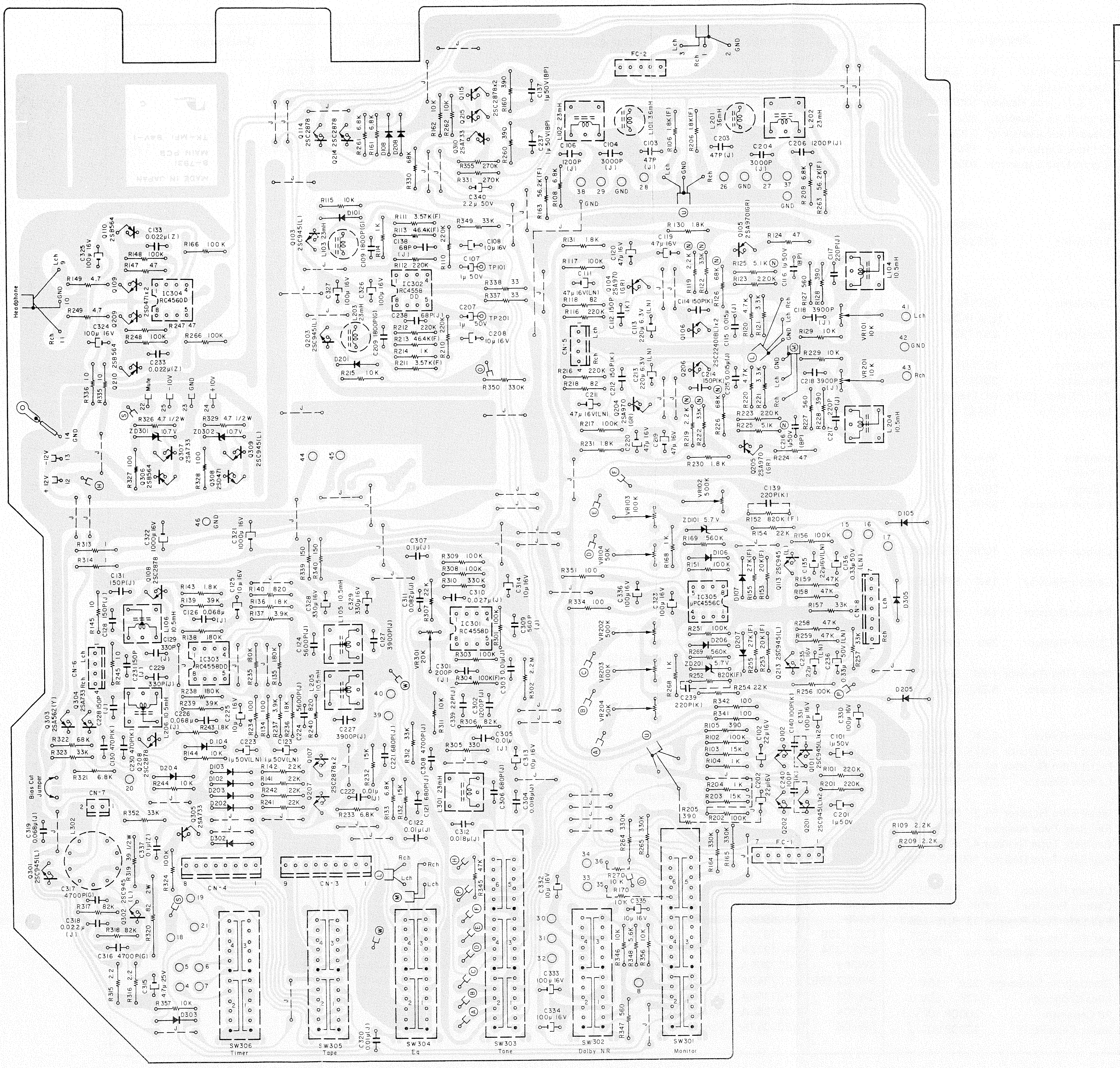


Fig. 7.9.2 Serial Nos.: A12102102 – A12103653

Note: Diode is 1SS53 unless otherwise specified.

Schematic Ref. No.	Part No.	Description
	BA04520A	**Main P.C.B. Ass'y** Serial Nos.: A12102102 – A12103653
	– Bias Osc. –	
Q301,302	0B01872A	Transistor 2SC945 (L)
Q303	0B06202A	Transistor 2SA562 (Y)
L302	0B06613A	Osc. Coil
R145,245	0B05936A	Carbon Resistor 10 ERD-25T J
R315,316	0B09212A	Fail Safe Type Resistor 2.2 RDF-25S J
R317,318	0B05668A	Carbon Resistor 82K ERD-25T J
R319	0B09296A	Fail Safe Type Resistor 39 RSF-1/2B J
R320	0B09295A	Fail Safe Type Resistor 82 RSF-2B J
R321	0B01682A	Carbon Resistor 6.8K ERD-25T J
C130,230	0B09286A	Ceramic Capacitor 470P 50V K
C315	0B01402A	Electrolytic Capacitor 4.7μ 25V
C316,317	0B09191A	PP Capacitor 4700P 100V G
C318	0B09405A	PP Capacitor 0.022μ 100V J
C319	0B09254A	PP Capacitor 0.068μ 100V J
	– Rec. Amp. –	
IC303	0B06146A	IC RC4558DD
Q107,108 207,208	0B06299A (0B06070A)	Transistor 2SC2878 (2SC1636)
Q304	0B06013A	Transistor 2SA733
D102,103 104,202 203,204 302	0B06181A	Silicon Diode 1SS53
L105,106 205,206	0B00068A	Trap Coil 10.5mH
R134,234	0B01679A	Carbon Resistor 100 ERD-25T J
R135,138 235,238	0B05640A	Carbon Resistor 180K ERD-25T J
R136,236	0B05560A	Carbon Resistor 18K ERD-25T J
R137,237	0B05675A	Carbon Resistor 3.9K ERD-25T J
R139,239	0B01854A	Carbon Resistor 39K ERD-25T J
R140,240	0B01680A	Carbon Resistor 820 ERD-25T J
R141,142 241,242	0B05615A	Carbon Resistor 22K ERD-25T J
R143,243	0B05614A	Carbon Resistor 1.8K ERD-25T J
R144,244	0B01888A	Carbon Resistor 10K ERD-25T J
R322	0B05692A	Carbon Resistor 68K ERD-25T J
R323	0B05509A	Carbon Resistor 33K ERD-25T J
R339,340	0B09213A	Fail Safe Type Resistor 150 RDF-25S J
C123,223	0B09223A	Electrolytic Capacitor 1μ 50V (LN)
C124,224	0B05659A	Mylar Capacitor 5600P 50V J
C125,225	0B01412A	Electrolytic Capacitor 10μ 16V
C126,226	0B05682A	Mylar Capacitor 0.068μ 50V J
C127,227	0B01804A	Mylar Capacitor 3900P 50V J
C128,131 228,231	0B09246A	Mica Capacitor 150P 50V J
C129,229	0B09322A	PP Capacitor 330P 100V J
C328,329	0B01502A	Electrolytic Capacitor 330μ 16V
	– PB Eq. Amp. –	
Q104,105 204,205	0B06180A	Transistor 2SA970 (GR)
Q106,206	0B06142A	Transistor 2SC2240 (BL)
L104,204	0B00068A	Trap Coil 10.5mH
VR101,201	0B07236A	Semi-fixed Volume 10K

Schematic Ref. No.	Part No.	Description
R116,123 216,223	0B05625A	Carbon Resistor 220K ERD-25T J
R117,217	0B01889A	Carbon Resistor 100K ERD-25T J
R118,218	0B05631A	Carbon Resistor 82 ERD-25T J
R119,219	0B09309A	Carbon Resistor 2.2K ERD-25TS J (Noiseless)
R120,220	0B01846A	Carbon Resistor 4.7K ERD-25T J
R121,221	0B01681A	Carbon Resistor 3.3K ERD-25T J
R122,222	0B09310A	Carbon Resistor 33K ERD-25TS J (Noiseless)
R124,224	0B01706A	Carbon Resistor 47 ERD-25T J
R125,225	0B09388A	Carbon Resistor 5.1K ERD-25TS J (Noiseless)
R126,226	0B09311A	Carbon Resistor 68K ERD-25TS J (Noiseless)
R127,227	0B05575A	Carbon Resistor 560 ERD-25T J
R128,228	0B05691A	Carbon Resistor 390 ERD-25T J
R129,229	0B01888A	Carbon Resistor 10K ERD-25T J
R130,131 230,231	0B05614A	Carbon Resistor 1.8K ERD-25T J
C111,211	0B09218A	Electrolytic Capacitor 47μ 16V (LN)
C112,114 212,214	0B09281A	Ceramic Capacitor 150P 50V K
C113,213	0B09151A	Electrolytic Capacitor 220μ 6.3V (LN)
C115,215	0B05557A	Mylar Capacitor 0.015μ 50V J
C116,216	0B09187A	Electrolytic Capacitor 1μ 50V (BP)
C117,217	0B09247A	Mica Capacitor 220P 50V J
C118,218	0B01804A	Mylar Capacitor 3900P 50V J
C119,120 219,220	0B01403A	Electrolytic Capacitor 47μ 16V
	— Headphone Amp. —	
IC304	0B06217A	IC RC4560D
Q109,209	0B06066A	Transistor 2SD471
Q110,210	0B06069A	Transistor 2SB564
R148,166 248,266	0B01889A	Carbon Resistor 100K ERD-25T J
R147,247	0B01706A	Carbon Resistor 47 ERD-25T J
R149,249	0B09321A	Fail Safe Type Resistor 4.7 RDF-25S J
R335,336	0B09216A	Fail Safe Type Resistor 10 RDF-25S J
C133,233	0B09291A	Ceramic Capacitor 0.022μ 50V Z
C324,325	0B01400A	Electrolytic Capacitor 100μ 16V
	— Meter Amp. —	
IC305	0B06216A	IC μPC4556C
Q113,213	0B01872A	Transistor 2SC945 (L)
ZD101,201	0B06304A	Zener Diode 5.7V XZ057
D105,106 107,205 206,207 305	0B06181A	Silicon Diode 1SS53
R151,156 251,256	0B01889A	Carbon Resistor 100K ERD-25T J
R152,252	0B09197A	Metal Film Resistor 820K SN14K2E F
R153,253	0B09439A	Metal Film Resistor 20K SN14K2E F
R154,254	0B05615A	Carbon Resistor 22K ERD-25T J
R155,255	0B09444A	Metal Film Resistor 27K SN14K2E F
R157,257	0B05509A	Carbon Resistor 33K ERD-25T J
R158,159 258,259 345	0B05641A	Carbon Resistor 47K ERD-25T J
R168,268	0B01857A	Carbon Resistor 1K ERD-25T J
R169,269	0B05784A	Carbon Resistor 560K ERD-25T J
R334,351	0B09215A	Fail Safe Type Resistor 100 RDF-25S J
C135,235	0B09137A	Electrolytic Capacitor 22μ 16V (LN)
C136,236	0B09327A	Electrolytic Capacitor 0.33μ 50V (LN)
C139,239	0B09283A	Ceramic Capacitor 220P 50V K
C323,336	0B01400A	Electrolytic Capacitor 100μ 16V
	— Line Amp. —	
IC302	0B06146A	IC RC4558DD
Q101,102 103,201 202,203 309	0B01872A	Transistor 2SC945 (L)
Q114,115 214,215	0B06299A (0B06070A)	Transistor 2SC2878 (2SC1636)
Q305,307 310	0B06013A	Transistor 2SA733
Q306	0B06069A	Transistor 2SB564
Q308	0B06066A	Transistor 2SD471
ZD301,302	0B06199A	Zener Diode 10.7V RD11EBB2
D101,108 201,208 303	0B06181A	Silicon Diode 1SS53
L101,201	0B03919B	Inductor 36mH
L102,202	0B03563A	19KHz Coil 23mH
L103,203	0B06676A	Inductor 36mH G
R101,110 112,201 210,212	0B05625A	Carbon Resistor 220K ERD-25T J
R102,202 324	0B01889A	Carbon Resistor 100K ERD-25T J
R103,132 203,232	0B01683A	Carbon Resistor 15K ERD-25T J
R104,114 204,214	0B01857A	Carbon Resistor 1K ERD-25T J
R105,160 205,260	0B05691A	Carbon Resistor 390 ERD-25T J
R106,206	0B09559A	Metal Film Resistor 1.8K SN14K2E F
R108,133 161,208 233,261	0B01682A	Carbon Resistor 6.8K ERD-25T J
R109,209	0B05622A	Carbon Resistor 2.2K ERD-25T J
R111,211	0B09507A	Metal Film Resistor 3.57K SN14K2E F
R113,213	0B09450A	Metal Film Resistor 46.4K SN14K2E F
R115,162 215,262	0B01888A	Carbon Resistor 10K ERD-25T J
R163,263	0B09595A	Metal Film Resistor 56.2K SN14K2E F
R313,314	0B09214A	Fail Safe Type Resistor 1 RDF-25S J
R326,329	0B09243A	Fail Safe Type Resistor 4.7 RSF-1/2B J
R327,328 341,342	0B09215A	Fail Safe Type Resistor 100 RDF-25S J
R330	0B05692A	Carbon Resistor 68K ERD-25T J
R331,355	0B05620A	Carbon Resistor 270K ERD-25T J
R337,338	0B09210A	Fail Safe Type Resistor 33 RDF-25S J
R352	0B05509A	Carbon Resistor 33K ERD-25T J
C101,107 201,207	0B01405A	Electrolytic Capacitor 1μ 50V
C102,202	0B01862A	Electrolytic Capacitor 22μ 16V
C103,203	0B09242A	Mica Capacitor 47P 50V J
C104,204	0B09262A	PP Capacitor 3000P 100V J
C106,206	0B05687A	Mylar Capacitor 1200P 50V J
C108,208	0B01412A	Electrolytic Capacitor 10μ 16V
C109,209	0B09409A	PP Capacitor 1800P 100V G
C121,221	0B09235A	PP Capacitor 680P 100V J
C122,222 320	0B05681A	Mylar Capacitor 0.01μ 50V J
C137,237	0B09187A	Electrolytic Capacitor 1μ 50V (BP)
C138,238	0B09393A	Ceramic Capacitor 68P 50V J
C140,240	0B09282A	Ceramic Capacitor 100P 50V K
C321,322	0B01397A	Electrolytic Capacitor 1000μ 16V
C326,327 330,331	0B01400A	Electrolytic Capacitor 100μ 16V
C337	0B09292A	Ceramic Capacitor 0.1μ 50V Z
C340	0B09372A	Electrolytic Capacitor 2.2μ 50V
	— Tone Osc. —	
IC301	0B06124B	IC RC4558D
L301	0B03563A	19KHz Coil 23mH
VR301	0B09093A	Semi-fixed Volume 20K
R301,303 308,309	0B01889A	Carbon Resistor 100K ERD-25T J
R302	0B05671A	Carbon Resistor 2.2M ERD-25T J
R304	0B09305A	Metal Film Resistor 100K SN14K2E F
R305	0B05577A	Carbon Resistor 330 ERD-25T J
R306	0B05668A	Carbon Resistor 82K ERD-25T J
R307	0B05615A	Carbon Resistor 22K ERD-25T J
R310	0B05627A	Carbon Resistor 330K ERD-25T J
R311	0B01888A	Carbon Resistor 10K ERD-25T J
R312	0B05509A	Carbon Resistor 33K ERD-25T J
C301	0B09275A	Mica Capacitor 200P 50V J
C302	0B05687A	Mylar Capacitor 1200P 50V J
C303,305	0B05681A	Mylar Capacitor 0.01μ 50V J
C304,312	0B05832A	Mylar Capacitor 0.018μ 50V J
C306	0B09235A	PP Capacitor 680P 100V J
C307	0B01780A	Mylar Capacitor 0.1μ 50V J
C308	0B05652A	Mylar Capacitor 4700P 50V J
C309	0B09323A	PP Capacitor 560P 100V J
C310	0B09045A	Mylar Capacitor 0.027μ 50V J
C311	0B05685A	Mylar Capacitor 0.082μ 50V J
C313,314	0B01412A	Electrolytic Capacitor 10μ 16V
C339	0B09279A	Ceramic Capacitor 22P 50V J
	— Miscellaneous —	
	0B07931C	Main P.C.B.
VR102,202	0B09107A	Semi-fixed Volume 500K
VR103,203	0B03832A	Semi-fixed Volume 100K
VR104,204	0B07228A	Semi-fixed Volume 50K
R164,165 264,265 350	0B05627A	Carbon Resistor 330K ERD-25T J
R170,270 346,356 357	0B01888A	Carbon Resistor 10K ERD-25T J
R347	0B05575A	Carbon Resistor 560 ERD-25T J
R348	0B01887A	Carbon Resistor 5.6K ERD-25T J
R349	0B05509A	Carbon Resistor 33K ERD-25T J
C332,335	0B01674A	Electrolytic Capacitor 10μ 16V
C333,334	0B01272A	Electrolytic Capacitor 100μ 16V
SW301	0B07365A	Rotary Switch 62N
SW302,305	0B07358A	Rotary Switch 43S
SW303	0B07359A	Rotary Switch 63S
SW304	0B07356A	Rotary Switch 42N
SW306	0B07357A	Rotary Switch 44S
CN3	0B08645A	9P-T Post
CN4	0B08644A	8P-T Post
CN5,6	0B08654A	4P-T Post
CN7	0B08656A	2P-T Post
CN8	0B08643A	7P-T Post
	0J04450A	Osc. Coil Cap (1 pce.)

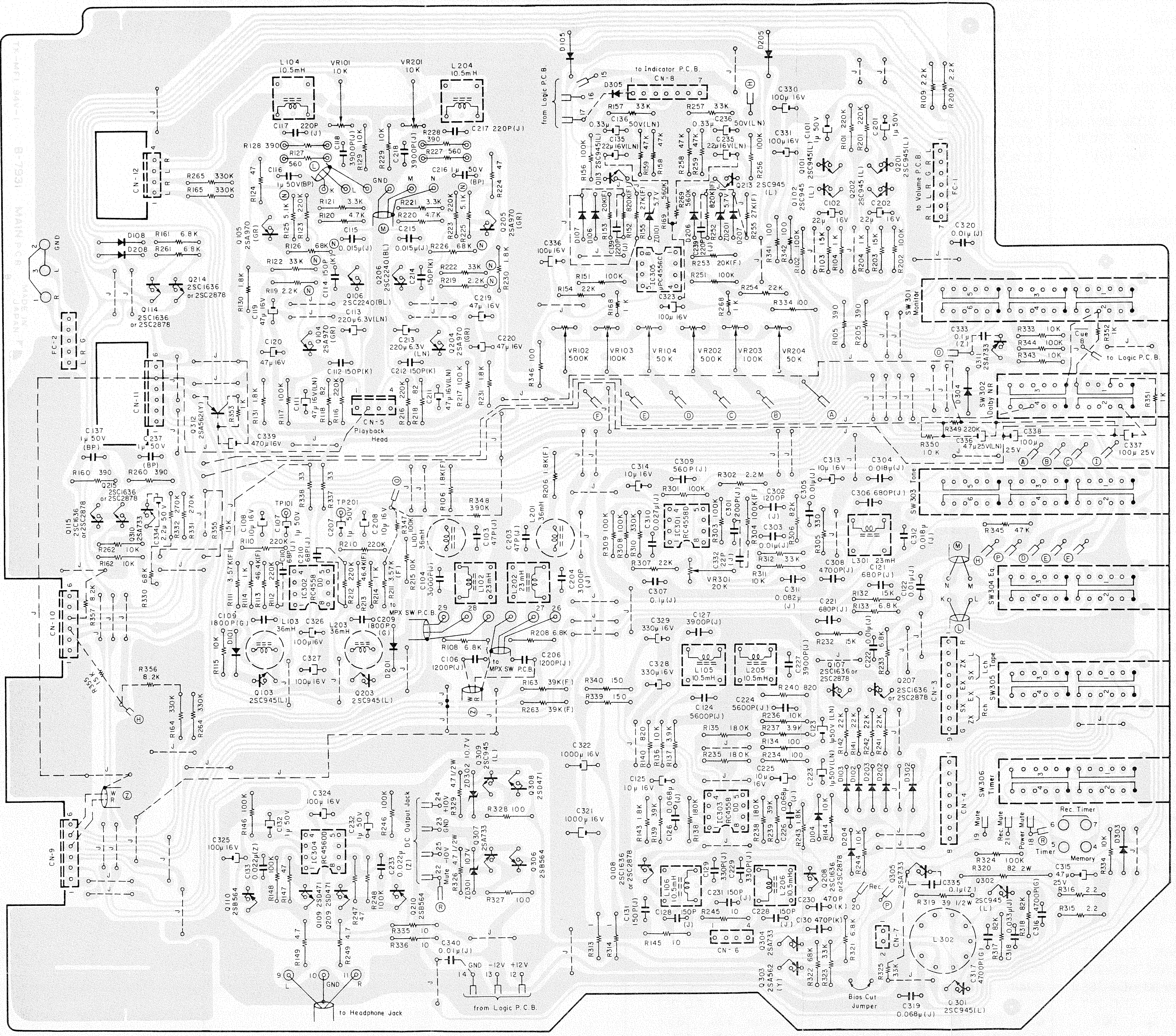

to Indicator P.C.B.
CN-8
from Logic P.C.B.
to Volume P.C.B.
FC-1
CN-12
CN-11
FC-2
CN-5
Playback Head
SW 301 Monitor
SW 302 Dolby NR
SW 303 Tone
SW 304 Eq.
SW 305 Tape
SW 306 Timer
to Logic P.C.B.
MPX SW P.C.B.
CN-10
CN-9
CN-3
CN-4
CN-6
CN-7
Rec Timer
Memory
Power Mute
Timer
L302
Bias Cut Jumper
GND -12V +12V
from Logic P.C.B.
to Headphone Jack
VR101 10K
VR201 10K
L104 10.5mH
L204 10.5mH
VR102 500K
VR103 100K
VR104 50K
VR202 500K
VR203 100K
VR204 50K
IC303 RC4558
DC Output Jack

Fig. 7.9.3 Serial Nos.: A12101501 – A12102101

Note: Diode is 1SS53 unless otherwise specified.

Schematic Ref. No.	Part No.	Description
	BA04367A	**Main P.C.B. Ass'y** Serial Nos.: A12101501 – A12102101
	– Bias Osc. –	
Q301,302	0B01872A	Transistor 2SC945 (L)
Q303	0B06202A	Transistor 2SA562 (Y)
L302	0B06613A	Osc. Coil
R145,245	0B05936A	Carbon Resistor 10 ERD-25T J
R315,316	0B09212A	Fail Safe Type Resistor 2.2 RDF-25S J
R317,318	0B05668A	Carbon Resistor 82K ERD-25T J
R319	0B09296A	Fail Safe Type Resistor 39 RSF-1/2B J
R320	0B09295A	Fail Safe Type Resistor 82 RSF-2B J
R321	0B01682A	Carbon Resistor 6.8K ERD-25T J
C130,230	0B09286A	Ceramic Capacitor 470P 50V K
C315	0B01402A	Electrolytic Capacitor 4.7μ 25V
C316,317	0B09191A	PP Capacitor 4700P 100V G
C318	0B05583A	PP Capacitor 0.033μ 100V J
C319	0B09254A	PP Capacitor 0.068μ 100V J
	– Rec. Amp. –	
IC303	0B06146A	IC RC4558DD
Q107,108 207,208	0B06299A (0B06070A)	Transistor 2SC2878 (2SC1636)
Q304	0B06013A	Transistor 2SA733
D102,103 104,202 203,204 302	0B06181A	Silicon Diode 1SS53
L105,106 205,206	0B00068A	Trap Coil 10.5mH
R134,234	0B01679A	Carbon Resistor 100 ERD-25T J
R135,138 235,238	0B05640A	Carbon Resistor 180K ERD-25T J
R136,144 236,244	0B05560A	Carbon Resistor 18K ERD-25T J
R137,237	0B05675A	Carbon Resistor 3.9K ERD-25T J
R139,239	0B01854A	Carbon Resistor 39K ERD-25T J
R140,240	0B01680A	Carbon Resistor 820 ERD-25T J
R141,142 241,242	0B05615A	Carbon Resistor 22K ERD-25T J
R143,243	0B05614A	Carbon Resistor 1.8K ERD-25T J
R322	0B05692A	Carbon Resistor 68K ERD-25T J
R323	0B05509A	Carbon Resistor 33K ERD-25T J
R339,340	0B09213A	Fail Safe Type Resistor 150 RDF-25S J
C123,223	0B09223A	Electrolytic Capacitor 1μ 50V (LN)
C124,224	0B05659A	Mylar Capacitor 5600P 50V J
C125,225	0B01412A	Electrolytic Capacitor 10μ 16V
C126,226	0B05682A	Mylar Capacitor 0.068μ 50V J
C127,227	0B01804A	Mylar Capacitor 3900P 50V J
C128,131 228,231	0B09246A	Mica Capacitor 150P 50V J
C129,229	0B09322A	PP Capacitor 330P 100V J
C328,329	0B01502A	Electrolytic Capacitor 330μ 16V
	– PB Eq. Amp. –	
Q104,105 204,205	0B06180A	Transistor 2SA970 (GR)
Q106,206	0B06142A	Transistor 2SC2240 (BL)
L104,204	0B00068A	Trap Coil 10.5mH
VR101,201	0B07236A	Semi-fixed Volume 10K

Schematic Ref. No.	Part No.	Description
R116,123 216,223	0B05625A	Carbon Resistor 220K ERD-25T J
R117,217	0B01889A	Carbon Resistor 100K ERD-25T J
R118,218	0B05631A	Carbon Resistor 82 ERD-25T J
R119,219	0B09309A	Carbon Resistor 2.2K ERD-25TS J (Noiseless)
R120,220	0B01846A	Carbon Resistor 4.7K ERD-25T J
R121,221	0B01681A	Carbon Resistor 3.3K ERD-25T J
R122,222	0B09310A	Carbon Resistor 33K ERD-25TS J (Noiseless)
R124,224	0B01706A	Carbon Resistor 47 ERD-25T J
R125,225	0B09388A	Carbon Resistor 5.1K ERD-25TS J (Noiseless)
R126,226	0B09311A	Carbon Resistor 68K ERD-25TS J (Noiseless)
R127,227	0B05575A	Carbon Resistor 560 ERD-25T J
R128,228	0B05691A	Carbon Resistor 390 ERD-25T J
R129,229	0B01888A	Carbon Resistor 10K ERD-25T J
R130,131 230,231	0B05614A	Carbon Resistor 1.8K ERD-25T J
C111,211	0B09218A	Electrolytic Capacitor 47μ 16V (LN)
C112,114 212,214	0B09281A	Ceramic Capacitor 150P 50V K
C113,213	0B09151A	Electrolytic Capacitor 220μ 6.3V (LN)
C115,215	0B05557A	Mylar Capacitor 0.015μ 50V J
C116,216	0B09187A	Electrolytic Capacitor 1μ 50V (BP)
C117,217	0B09247A	Mica Capacitor 220P 50V J
C118,218	0B01804A	Mylar Capacitor 3900P 50V J
C119,120 219,220	0B01403A	Electrolytic Capacitor 47μ 16V
	— Headphone Amp. —	
IC304	0B06217A	IC RC4560D
Q109,209	0B06066A	Transistor 2SD471
Q110,210	0B06069A	Transistor 2SB564
R146,148 246,248	0B01889A	Carbon Resistor 100K ERD-25T J
R147,247	0B01706A	Carbon Resistor 47 ERD-25T J
R149,249	0B09321A	Fail Safe Type Resistor 4.7 RDF-25S J
R335,336	0B09216A	Fail Safe Type Resistor 10 RDF-25S J
C132,232	0B01405A	Electrolytic Capacitor 1μ 50V
C133,233	0B09291A	Ceramic Capacitor 0.022μ 50V Z
C324,325	0B01400A	Electrolytic Capacitor 100μ 16V
	— Meter Amp. —	
IC305	0B06216A	IC μPC4556C
Q113,213	0B01872A	Transistor 2SC945 (L)
ZD101,201	0B06304A	Zener Diode 5.7V XZ057
D105,106 107,205 206,207 305	0B06181A	Silicon Diode 1SS53
R151,156 251,256	0B01889A	Carbon Resistor 100K ERD-25T J
R152,252	0B09197A	Metal Film Resistor 820K SN14K2E F
R153,253	0B09439A	Metal Film Resistor 20K SN14K2E F
R154,254	0B05615A	Carbon Resistor 22K ERD-25T J
R155,255	0B09444A	Metal Film Resistor 27K SN14K2E F
R157,257	0B05509A	Carbon Resistor 33K ERD-25T J
R158,159 258,259 345	0B05641A	Carbon Resistor 47K ERD-25T J
R168,268	0B01857A	Carbon Resistor 1K ERD-25T J
R169,269	0B05784A	Carbon Resistor 560K ERD-25T J
R334,351	0B09215A	Fail Safe Type Resistor 100 RDF-25S J
C135,235	0B09137A	Electrolytic Capacitor 22μ 16V (LN)
C136,236	0B09327A	Electrolytic Capacitor 0.33μ 50V (LN)
C139,239	0B09283A	Ceramic Capacitor 220P 50V K
C323,336	0B01400A	Electrolytic Capacitor 100μ 16V
	— Line Amp. —	
IC302	0B06146A	IC RC4558DD
Q101,102 103,201 202,203 309	0B01872A	Transistor 2SC945 (L)
Q114,115 214,215	0B06299A (0B06070A)	Transistor 2SC2878 (2SC1636)
Q305,307 310	0B06013A	Transistor 2SA733
Q306	0B06069A	Transistor 2SB564
Q308	0B06066A	Transistor 2SD471
ZD301,302	0B06199A	Zener Diode 10.7V RD11EBB2
D101,108 201,208 303	0B06181A	Silicon Diode 1SS53
L101,103 201,203	0B03919B	Inductor 36mH
L102,202	0B03563A	19KHz Coil 23mH
R101,110 112,201 210,212	0B05625A	Carbon Resistor 220K ERD-25T J
R102,202 324	0B01889A	Carbon Resistor 100K ERD-25T J
R103,132 203,232	0B01683A	Carbon Resistor 15K ERD-25T J
R104,114 204,214	0B01857A	Carbon Resistor 1K ERD-25T J
R105,160 205,260	0B05691A	Carbon Resistor 390 ERD-25T J
R106,206	0B09559A	Metal Film Resistor 1.8K SN14K2E F
R108,133 161,208 233,261	0B01682A	Carbon Resistor 6.8K ERD-25T J
R109,209	0B05622A	Carbon Resistor 2.2K ERD-25T J
R111,211	0B09507A	Metal Film Resistor 3.57K SN14K2E F
R113,213	0B09450A	Metal Film Resistor 46.4K SN14K2E F
R115,162 215,262	0B01888A	Carbon Resistor 10K ERD-25T J
R163,263	0B09560A	Metal Film Resistor 39K SN14K2E F
R313,314	0B09214A	Fail Safe Type Resistor 1 RDF-25S J
R325	0B05509A	Carbon Resistor 33K ERD-25T J
R326,329	0B09243A	Fail Safe Type Resistor 4.7 RSF-1/2B J
R327,328 341,342	0B09215A	Fail Safe Type Resistor 100 RDF-25S J
R330	0B05692A	Carbon Resistor 68K ERD-25T J
R331,332	0B05620A	Carbon Resistor 270K ERD-25T J
R337,338	0B09210A	Fail Safe Type Resistor 33 RDF-25S J
C101,107 201,207	0B01405A	Electrolytic Capacitor 1μ 50V
C102,202	0B01862A	Electrolytic Capacitor 22μ 16V
C103,203	0B09242A	Mica Capacitor 47P 50V J
C104,204	0B09262A	PP Capacitor 3000P 100V J
C106,206	0B05687A	Mylar Capacitor 1200P 50V J
C108,208	0B01412A	Electrolytic Capacitor 10μ 16V
C109,209	0B09409A	PP Capacitor 1800P 50V G
C110,210	0B09393A	Ceramic Capacitor 68P 50V J
C121,221	0B09235A	Mylar Capacitor 680P 50V J
C122,222 320	0B05681A	Mylar Capacitor 0.01μ 50V J
C137,237	0B09187A	Electrolytic Capacitor 1μ 50V (BP)
C321,322	0B01397A	Electrolytic Capacitor 1000μ 16V
C326,327 330,331	0B01400A	Electrolytic Capacitor 100μ 16V
C334	0B09372A	Electrolytic Capacitor 2.2μ 50V
C335	0B09292A	Ceramic Capacitor 0.1μ 50V Z
	— Tone Osc. —	
IC301	0B06124B	IC RC4558D
L301	0B03563A	19KHz Coil 23mH
VR301	0B09093A	Semi-fixed Volume 20K
R301,303 308,309	0B01889A	Carbon Resistor 100K ERD-25T J
R302	0B05671A	Carbon Resistor 2.2M ERD-25T J
R304	0B09305A	Metal Film Resistor 100K SN14K2E F
R305	0B05577A	Carbon Resistor 330 ERD-25T J
R306	0B05668A	Carbon Resistor 82K ERD-25T J
R307	0B05615A	Carbon Resistor 22K ERD-25T J
R310	0B05627A	Carbon Resistor 330K ERD-25T J
R311	0B01888A	Carbon Resistor 10K ERD-25T J
R312	0B05509A	Carbon Resistor 33K ERD-25T J
C301	0B09275A	Mica Capacitor 200P 50V J
C302	0B05687A	Mylar Capacitor 1200P 50V J
C303,305	0B05681A	Mylar Capacitor 0.01μ 50V J
C304,312	0B05832A	Mylar Capacitor 0.018μ 50V J
C306	0B09235A	PP Capacitor 680P 100V J
C307	0B01780A	Mylar Capacitor 0.1μ 50V J
C308	0B05652A	Mylar Capacitor 4700P 50V J
C309	0B09323A	PP Capacitor 560P 100V J
C310	0B09045A	Mylar Capacitor 0.027μ 50V J
C311	0B05685A	Mylar Capacitor 0.082μ 50V J
C313,314	0B01412A	Electrolytic Capacitor 10μ 16V
C332	0B09279A	Ceramic Capacitor 22P 50V J
	— Miscellaneous —	
	0B07931B	Main P.C.B.
Q311	0B06013A	Transistor 2SA733
Q312	0B06202A	Transistor 2SA562 (Y)
D303,304	0B06181A	Silicon Diode 1SS53
VR102,202	0B09107A	Semi-fixed Volume 500K
VR103,203	0B03832A	Semi-fixed Volume 100K
VR104,204	0B07228A	Semi-fixed Volume 50K
R164,165 264,265	0B05627A	Carbon Resistor 330K ERD-25T J
R333,334 343,350	0B01888A	Carbon Resistor 10K ERD-25T J
R344,347	0B01889A	Carbon Resistor 100K ERD-25T J
R348	0B05676A	Carbon Resistor 390K ERD-25T J
R349	0B05625A	Carbon Resistor 220K ERD-25T J
R351,352 353	0B01857A	Carbon Resistor 1K ERD-25T J
R354,355	0B01683A	Carbon Resistor 15K ERD-25T J
R356,357	0B01856A	Carbon Resistor 8.2K ERD-25T J
C333	0B09292A	Ceramic Capacitor 0.1μ 50V Z
C336	0B09333A	Electrolytic Capacitor 4.7μ 25V (LN)
C337,338	0B01272A	Electrolytic Capacitor 100μ 25V
C339	0B01392A	Electrolytic Capacitor 470μ 16V
C340	0B05681A	Mylar Capacitor 0.01μ 50V J
SW301	0B07365A	Rotary Switch 62N
SW302,305	0B07358A	Rotary Switch 43S
SW303	0B07359A	Rotary Switch 63S
SW304	0B07356A	Rotary Switch 42N
SW306	0B07357A	Rotary Switch 44S
CN3	0B08645A	9P-T Post
CN4	0B08644A	8P-T Post
CN5,6	0B08654A	4P-T Post
CN7	0B08656A	2P-T Post
CN8	0B08643A	7P-T Post
CN9,10,11	0B08442A	6P-B Post
CN12	0B08804A	4P-B Post
	0J04417A	Osc. Coil Shield Plate (1 pce.)

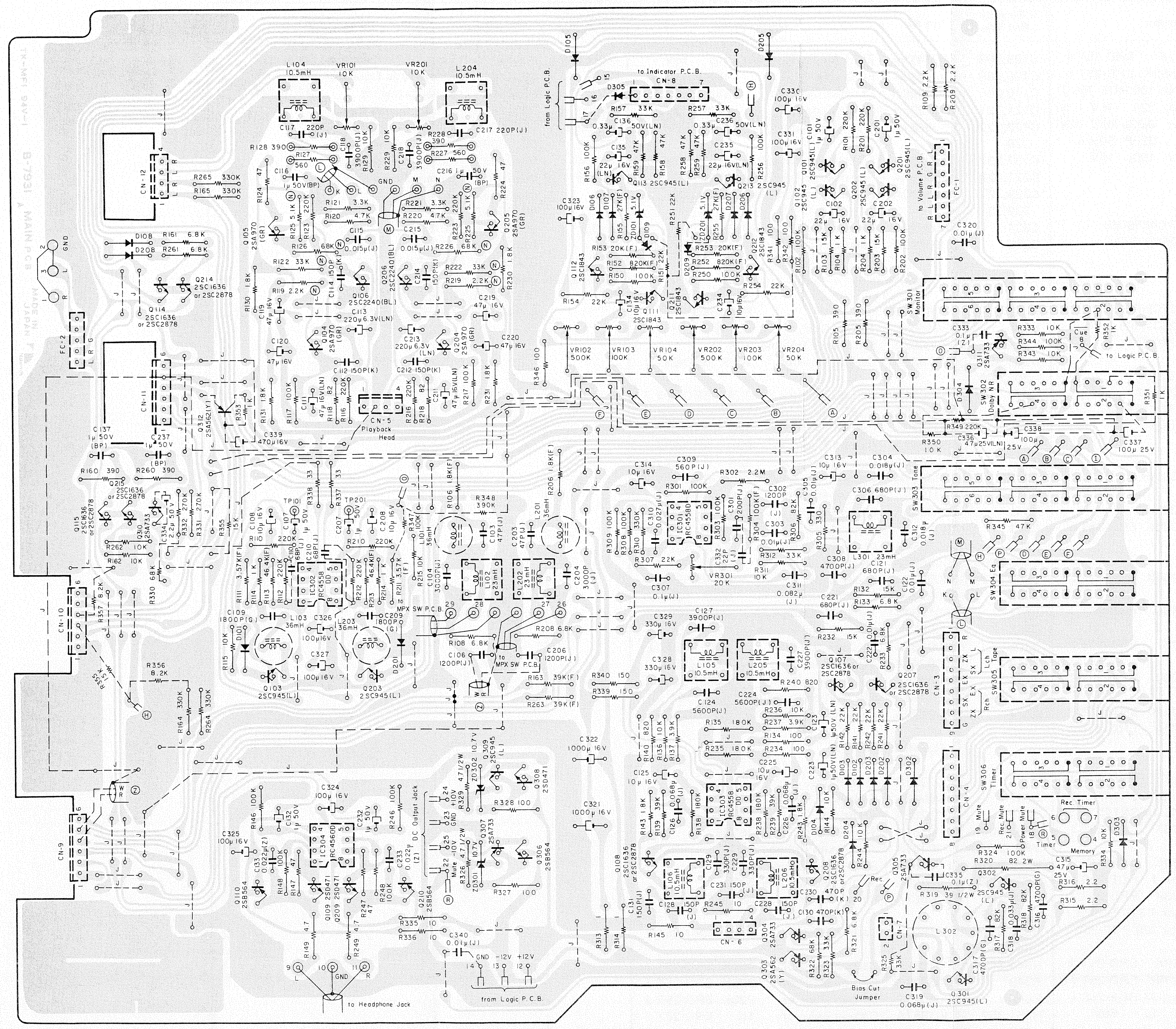

to Indicator P.C.B.
from Logic P.C.B.
to Logic P.C.B.
to Volume P.C.B.
to Headphone Jack
from Logic P.C.B.
Playback Head
MPX SW P.C.B.
DC Output Jack
Bias Cut Jumper
SW301 Monitor
SW302 Dolby NR
SW303 Tone
SW304 Eq
SW305 Tape
SW306 Timer
Rec Timer
Memory
MAIN P.C.B.

Fig. 7.9.4 Serial Nos.: A12101001 — A12101500

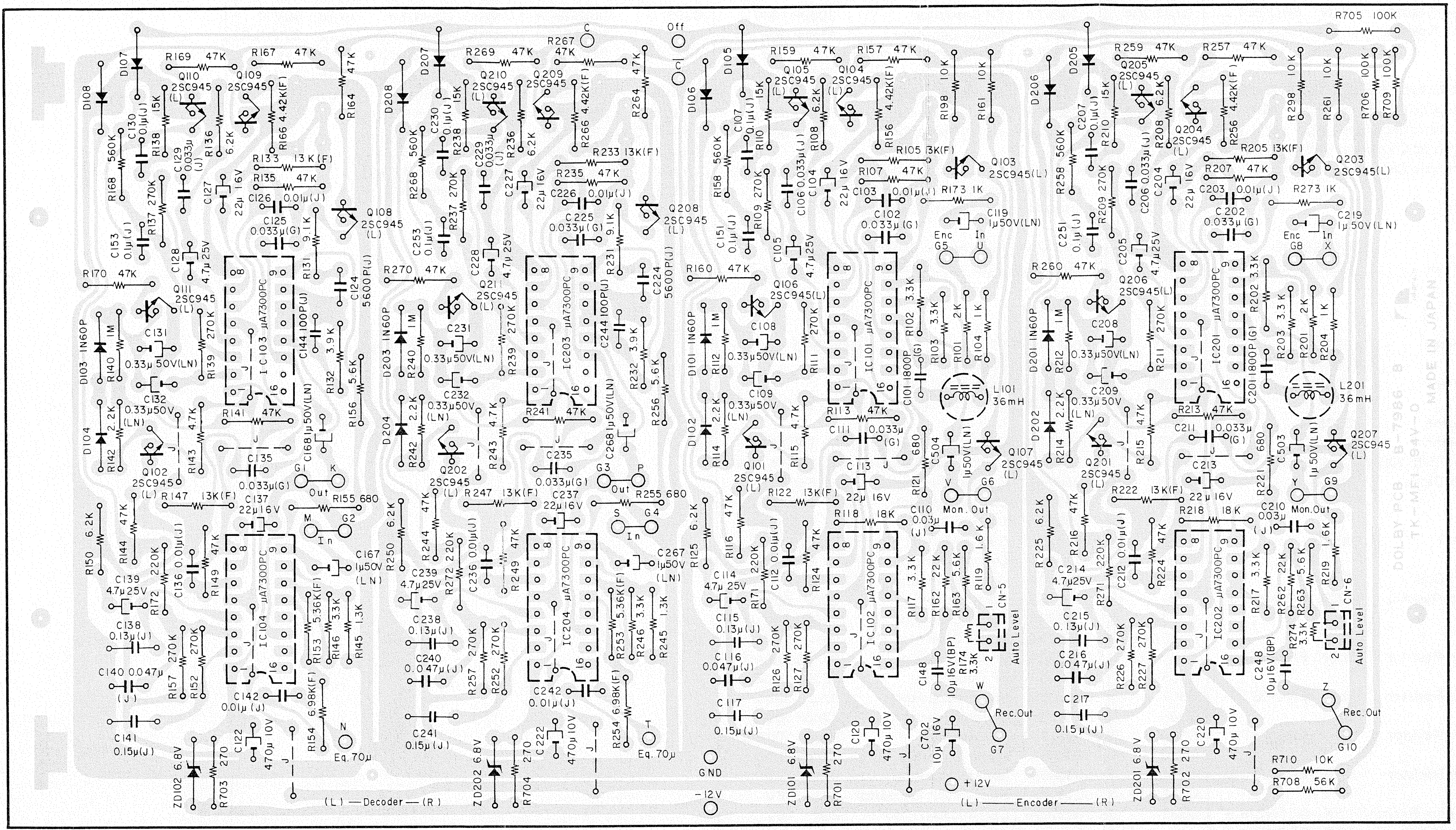
Note: Diode is 1SS53 unless otherwise specified.

Schematic Ref. No.	Part No.	Description
	BA04367A	**Main P.C.B. Ass'y** Serial Nos.: A12101001 — A12101500
	— Bias Osc. —	
Q301,302	0B01872A	Transistor 2SC945 (L)
Q303	0B06202A	Transistor 2SA562 (Y)
L302	0B06613A	Osc. Coil
R145,245	0B05936A	Carbon Resistor 10 ERD-25T J
R315,316	0B09212A	Fail Safe Type Resistor 2.2 RDF-25S J
R317,318	0B05668A	Carbon Resistor 82K ERD-25T J
R319	0B09296A	Fail Safe Type Resistor 39 RSF-1/2B J
R320	0B09295A	Fail Safe Type Resistor 82 RSF-2B J
R321	0B01682A	Carbon Resistor 6.8K ERD-25T J
C130,230	0B09286A	Ceramic Capacitor 470P 50V K
C315	0B01402A	Electrolytic Capacitor 4.7μ 25V
C316,317	0B09191A	PP Capacitor 4700P 100V G
C318	0B05583A	PP Capacitor 0.033μ 100V J
C319	0B09254A	PP Capacitor 0.068μ 100V J
	— Rec. Amp. —	
IC303	0B06146A	IC RC4558DD
Q107,108 207,208	0B06299A (0B06070A)	Transistor 2SC2878 (2SC1636)
Q304	0B06013A	Transistor 2SA733
D102,103 104,202 203,204 302	0B06181A	Silicon Diode 1SS53
L105,106 205,206	0B00068A	Trap Coil 10.5mH
R134,234	0B01679A	Carbon Resistor 100 ERD-25T J
R135,138 235,238	0B05640A	Carbon Resistor 180K ERD-25T J
R136,144 236,244	0B05560A	Carbon Resistor 18K ERD-25T J
R137,237	0B05675A	Carbon Resistor 3.9K ERD-25T J
R139,239	0B01854A	Carbon Resistor 39K ERD-25T J
R140,240	0B01680A	Carbon Resistor 820 ERD-25T J
R141,142 241,242	0B05615A	Carbon Resistor 22K ERD-25T J
R143,243	0B05614A	Carbon Resistor 1.8K ERD-25T J
R322	0B05692A	Carbon Resistor 68K ERD-25T J
R323	0B05509A	Carbon Resistor 33K ERD-25T J
R339,340	0B09213A	Fail Safe Type Resistor 150 RDF-25S J
C123,223	0B09223A	Electrolytic Capacitor 1μ 50V (LN)
C124,224	0B05659A	Mylar Capacitor 5600P 50V J
C125,225	0B01412A	Electrolytic Capacitor 10μ 16V
C126,226	0B05682A	Mylar Capacitor 0.068μ 50V J
C127,227	0B01804A	Mylar Capacitor 3900P 50V J
C128,131 228,231	0B09246A	Mica Capacitor 150P 50V J
C129,229	0B09322A	PP Capacitor 330P 100V J
C328,329	0B01502A	Electrolytic Capacitor 330μ 16V
	— PB Eq. Amp. —	
Q104,105 204,205	0B06180A	Transistor 2SA970 (GR)
Q106,206	0B06142A	Transistor 2SC2240 (BL)
L104,204	0B00068A	Trap Coil 10.5mH
VR101,201	0B07236A	Semi-fixed Volume 10K

Schematic Ref. No.	Part No.	Description
R116,123 216,223	0B05625A	Carbon Resistor 220K ERD-25T J
R117,217	0B01889A	Carbon Resistor 100K ERD-25T J
R118,218	0B05631A	Carbon Resistor 82 ERD-25T J
R119,219	0B09309A	Carbon Resistor 2.2K ERD-25TS J (Noiseless)
R120,220	0B01846A	Carbon Resistor 4.7K ERD-25T J
R121,221	0B01681A	Carbon Resistor 3.3K ERD-25T J
R122,222	0B09310A	Carbon Resistor 33K ERD-25TS J (Noiseless)
R124,224	0B01706A	Carbon Resistor 47 ERD-25T J
R125,225	0B09388A	Carbon Resistor 5.1K ERD-25TS J (Noiseless)
R126,226	0B09311A	Carbon Resistor 68K ERD-25TS J (Noiseless)
R127,227	0B05575A	Carbon Resistor 560 ERD-25T J
R128,228	0B05691A	Carbon Resistor 390 ERD-25T J
R129,229	0B01888A	Carbon Resistor 10K ERD-25T J
R130,131 230,231	0B05614A	Carbon Resistor 1.8K ERD-25T J
C111,211	0B09218A	Electrolytic Capacitor 47μ 16V (LN)
C112,114 212,214	0B09281A	Ceramic Capacitor 150P 50V K
C113,213	0B09151A	Electrolytic Capacitor 220μ 6.3V (LN)
C115,215	0B05557A	Mylar Capacitor 0.015μ 50V J
C116,216	0B09187A	Electrolytic Capacitor 1μ 50V (BP)
C117,217	0B09247A	Mica Capacitor 220P 50V J
C118,218	0B01804A	Mylar Capacitor 3900P 50V J
C119,120 219,220	0B01403A	Electrolytic Capacitor 47μ 16V
	— Headphone Amp. —	
IC304	0B06217A	IC RC4560D
Q109,209	0B06066A	Transistor 2SD471
Q110,210	0B06069A	Transistor 2SB564
R146,148 246,248	0B01889A	Carbon Resistor 100K ERD-25T J
R147,247	0B01706A	Carbon Resistor 47 ERD-25T J
R149,249	0B09321A	Fail Safe Type Resistor 4.7 RDF-25S J
R335,336	0B09216A	Fail Safe Type Resistor 10 RDF-25S J
C132,232	0B01405A	Electrolytic Capacitor 1μ 50V
C133,233	0B09291A	Ceramic Capacitor 0.022μ 50V Z
C324,325	0B01400A	Electrolytic Capacitor 100μ 16V
	— Meter Amp. —	
Q111,112 211,212	0B06062A (0B06301A)	Transistor 2SC1222 (2) (E) (2SC1843)
Q113,213	0B01872A	Transistor 2SC945 (L)
ZD101,201	0B06058A	Zener Diode 5.1V YZ051
D105,106 107,109 205,206 207,209 305	0B06181A	Silicon Diode 1SS53
R150,156 250,256	0B01889A	Carbon Resistor 100K ERD-25T J
R151,154 251,254	0B05615A	Carbon Resistor 22K ERD-25T J
R152,252	0B09197A	Metal Film Resistor 820K SN14K2E F
R153,253	0B09439A	Metal Film Resistor 20K SN14K2E F
R155,255	0B09444A	Metal Film Resistor 27K SN14K2E F
R157,257	0B05509A	Carbon Resistor 33K ERD-25T J
R158,159 258,259 345	0B05641A	Carbon Resistor 47K ERD-25T J
R346	0B09215A	Fail Safe Type Resistor 100 RDF-25S J
C134,234	0B01412A	Electrolytic Capacitor 10μ 16V
C135,235	0B09137A	Electrolytic Capacitor 22μ 16V (LN)
C136,236	0B09327A	Electrolytic Capacitor 0.33μ 50V (LN)
C323	0B01400A	Electrolytic Capacitor 100μ 16V
	— Line Amp. —	
IC302	0B06146A	IC RC4558DD
Q101,102 103,201 202,203 309	0B01872A	Transistor 2SC945 (L)
Q114,115 214,215	0B06299A (0B06070A)	Transistor 2SC2878 (2SC1636)
Q305,307 310	0B06013A	Transistor 2SA733
Q306	0B06069A	Transistor 2SB564
Q308	0B06066A	Transistor 2SD471
ZD301,302	0B06199A	Zener Diode 10.7V RD11EBB2
D101,108 201,208 303	0B06181A	Silicon Diode 1SS53
L101,103 201,203	0B03919B	Inductor 36mH
L102,202	0B03563A	19KHz Coil 23mH
R101,110 112,201 210,212	0B05625A	Carbon Resistor 220K ERD-25T J
R102,202 324	0B01889A	Carbon Resistor 100K ERD-25T J
R103,132 203,232	0B01683A	Carbon Resistor 15K ERD-25T J
R104,114 204,214	0B01857A	Carbon Resistor 1K ERD-25T J
R105,160 205,260	0B05691A	Carbon Resistor 390 ERD-25T J
R106,206	0B09559A	Metal Film Resistor 1.8K SN14K2E F
R108,133 161,208 233,261	0B01682A	Carbon Resistor 6.8K ERD-25T J
R109,209	0B05622A	Carbon Resistor 2.2K ERD-25T J
R111,211	0B09507A	Metal Film Resistor 3.57K SN14K2E F
R113,213	0B09450A	Metal Film Resistor 46.4K SN14K2E F
R115,162 215,262	0B01888A	Carbon Resistor 10K ERD-25T J
R163,263	0B09560A	Metal Film Resistor 39K SN14K2E F
R313,314	0B09214A	Fail Safe Type Resistor 1 RDF-25S J
R325	0B05509A	Carbon Resistor 33K ERD-25T J
R326,329	0B09243A	Fail Safe Type Resistor 4.7 RSF-1/2B J
R327,328 341,342	0B09215A	Fail Safe Type Resistor 100 RDF-25S J
R330	0B05692A	Carbon Resistor 68K ERD-25T J
R331,332	0B05620A	Carbon Resistor 270K ERD-25T J
R337,338	0B09210A	Fail Safe Type Resistor 33 RDF-25S J
C101,107 201,207	0B01405A	Electrolytic Capacitor 1μ 50V
C102,202	0B01862A	Electrolytic Capacitor 22μ 16V
C103,203	0B09242A	Mica Capacitor 47P 50V J
C104,204	0B09262A	PP Capacitor 3000P 100V J
C106,206	0B05687A	Mylar Capacitor 1200P 50V J
C108,208	0B01412A	Electrolytic Capacitor 10μ 16V
C109,209	0B09409A	PP Capacitor 1800P 50V G
C110,210	0B09393A	Ceramic Capacitor 68P 50V J
C121,221	0B09235A	Mylar Capacitor 680P 50V J
C122,222 320	0B05681A	Mylar Capacitor 0.01μ 50V J
C137,237	0B09187A	Electrolytic Capacitor 1μ 50V (BP)
C321,322	0B01397A	Electrolytic Capacitor 1000μ 16V
C326,327 330,331	0B01400A	Electrolytic Capacitor 100μ 16V
C334	0B09372A	Electrolytic Capacitor 2.2μ 50V
C335	0B09292A	Ceramic Capacitor 0.1μ 50V Z
	— Tone Osc. —	
IC301	0B06124B	IC RC4558D
L301	0B03563A	19KHz Coil 23mH
VR301	0B09093A	Semi-fixed Volume 20K
R301,303 308,309	0B01889A	Carbon Resistor 100K ERD-25T J
R302	0B05671A	Carbon Resistor 2.2M ERD-25T J
R304	0B09305A	Metal Film Resistor 100K SN14K2E F
R305	0B05577A	Carbon Resistor 330 ERD-25T J
R306	0B05668A	Carbon Resistor 82K ERD-25T J
R307	0B05615A	Carbon Resistor 22K ERD-25T J
R310	0B05627A	Carbon Resistor 330K ERD-25T J
R311	0B01888A	Carbon Resistor 10K ERD-25T J
R312	0B05509A	Carbon Resistor 33K ERD-25T J
C301	0B09275A	Mica Capacitor 200P 50V J
C302	0B05687A	Mylar Capacitor 1200P 50V J
C303,305	0B05681A	Mylar Capacitor 0.01μ 50V J
C304,312	0B05832A	Mylar Capacitor 0.018μ 50V J
C306	0B09235A	PP Capacitor 680P 100V J
C307	0B01780A	Mylar Capacitor 0.1μ 50V J
C308	0B05652A	Mylar Capacitor 4700P 50V J
C309	0B09323A	PP Capacitor 560P 100V J
C310	0B09045A	Mylar Capacitor 0.027μ 50V J
C311	0B05685A	Mylar Capacitor 0.082μ 50V J
C313,314	0B01412A	Electrolytic Capacitor 10μ 16V
C332	0B09279A	Ceramic Capacitor 22P 50V J
	— Miscellaneous —	
	0B07931A	Main P.C.B.
Q311	0B06013A	Transistor 2SA733
Q312	0B06202A	Transistor 2SA562 (Y)
D303,304	0B06181A	Silicon Diode 1SS53
VR102,202	0B09107A	Semi-fixed Volume 500K
VR103,203	0B03832A	Semi-fixed Volume 100K
VR104,204	0B07228A	Semi-fixed Volume 50K
R164,165 264,265	0B05627A	Carbon Resistor 330K ERD-25T J
R333,334 343,350	0B01888A	Carbon Resistor 10K ERD-25T J
R344,347	0B01889A	Carbon Resistor 100K ERD-25T J
R348	0B05676A	Carbon Resistor 390K ERD-25T J
R349	0B05625A	Carbon Resistor 220K ERD-25T J
R351,352 353	0B01857A	Carbon Resistor 1K ERD-25T J
R354,355	0B01683A	Carbon Resistor 15K ERD-25T J
R356,357	0B01856A	Carbon Resistor 8.2K ERD-25T J
C333	0B09292A	Ceramic Capacitor 0.1μ 50V Z
C336	0B09333A	Electrolytic Capacitor 4.7μ 25V (LN)
C337,338	0B01272A	Electrolytic Capacitor 100μ 25V
C339	0B01392A	Electrolytic Capacitor 470μ 16V
C340	0B05681A	Mylar Capacitor 0.01μ 50V J
SW301	0B07365A	Rotary Switch 62N
SW302,305	0B07358A	Rotary Switch 43S
SW303	0B07359A	Rotary Switch 63S
SW304	0B07356A	Rotary Switch 42N
SW306	0B07357A	Rotary Switch 44S
CN3	0B08645A	9P-T Post
CN4	0B08644A	8P-T Post
CN5,6	0B08654A	4P-T Post
CN7	0B08656A	2P-T Post
CN8	0B08643A	7P-T Post
CN9,10,11	0B08442A	6P-B Post
CN12	0B08804A	4P-B Post
	0J04417A	Osc. Coil Shield Plate (1 pce.)

7.10. Dolby NR P.C.B. Ass'y

7.10.1. Dolby NR P.C.B. Ass'y (Serial No.: A12102102 –)


R705 100K
Off
C
R267
IC103 µA7300PC
IC104 µA7300PC
IC203 µA7300PC
IC204 µA7300PC
IC101 µA7300PC
IC102 µA7300PC
IC201 µA7300PC
IC202 µA7300PC
L101 36mH
L201 36mH
Q110 2SC945
Q109 2SC945
Q210 2SC945
Q209 2SC945
Q105 2SC945
Q104 2SC945
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Q203 2SC945(L)
Q108 2SC945 (L)
Q208 2SC945 (L)
Q111 2SC945 (L)
Q211 2SC945 (L)
Q106 2SC945(L)
Q206 2SC945(L)
Q102 2SC945
Q202 2SC945
Q101 2SC945 (L)
Q201 2SC945 (L)
Q107 2SC945 (L)
Q207 2SC945 (L)
Enc In G5
Enc In G8
Out
In
Mon. Out
Auto Level
CN-5
CN-6
Rec. Out
Eq. 70µ
GND
-12V
+12V
(L) — Decoder — (R)
(L) —— Encoder —— (R)
DOLBY PCB E-7986 B
TK-MFI-94V-0
MADE IN JAPAN

Fig. 7.10.1 Serial No.: A12102102 –

Schematic Ref. No.	Part No.	Description
	BA04518A	**Dolby NR P.C.B. Ass'y** Serial No.: A12102102 –
	– BC PB Dolby NR –	
IC103,104 203,204	0B06200A	IC µA7300PC
Q102,108 109,110 111,202 208,209 210,211	0B01872A	Transistor 2SC945 (L)
ZD102,202	0B06315A	Zener Diode 6.8V YZ068
D103,203	0B00030A	Germanium Diode 1N60P
D104,107 108,204 207,208	0B06181A	Silicon Diode 1SS53
R131,231	0B09226A	Carbon Resistor 9.1K ERD-25T J
R132,232	0B05675A	Carbon Resistor 3.9K ERD-25T J
R133,147 233,247	0B09557A	Metal Film Resistor 13K SN14K2E F
R135,141 144,149 164,167 169,170 235,241 244,249 264,267 269,270	0B05641A	Carbon Resistor 47K ERD-25T J
R136,150 236,250	0B09271A	Carbon Resistor 6.2K ERD-25T J
R137,139 152,157 237,239 252,257	0B05620A	Carbon Resistor 270K ERD-25T J
R138,238	0B01683A	Carbon Resistor 15K ERD-25T J
R140,240	0B05776A	Carbon Resistor 1M ERD-25T J
R142,242	0B05622A	Carbon Resistor 2.2K ERD-25T J
R143,243	0B01846A	Carbon Resistor 4.7K ERD-25T J
R145,245	0B09074A	Carbon Resistor 1.3K ERD-25T J
R146,174 246,274	0B01681A	Carbon Resistor 3.3K ERD-25T J
R153,253	0B09426A	Metal Film Resistor 5.36K SN14K2E F
R154,254	0B09604A	Metal Film Resistor 6.98K SN14K2E F
R155,255	0B05794A	Carbon Resistor 680 ERD-25T J
R156,256	0B01887A	Carbon Resistor 5.6K ERD-25T J
R166,266	0B09558A	Metal Film Resistor 4.42K SN14K2E F
R168,268	0B05784A	Carbon Resistor 560K ERD-25T J
R172,272	0B05625A	Carbon Resistor 220K ERD-25T J
R703,704	0B05645A	Carbon Resistor 270 ERD-25T J
C122,222	0B05884A	Electrolytic Capacitor 470µ 10V
C124,224	0B05659A	Mylar Capacitor 5600P 50V J
C125,135 225,235	0B09240A	PP Capacitor 0.033µ 100V G
C126,136 142,226 236,242	0B05681A	Mylar Capacitor 0.01µ 50V J
C127,137 227,237	0B01862A	Electrolytic Capacitor 22µ 16V
C128,139 228,239	0B01402A	Electrolytic Capacitor 4.7µ 25V
C129,229	0B05583A	Mylar Capacitor 0.033µ 50V J
C130,153 230,253	0B01780A	Mylar Capacitor 0.1µ 50V J

Schematic Ref. No.	Part No.	Description
C131,132 231,232	0B09567A	Electrolytic Capacitor 0.33μ 50V (LN)
C138,238	0B09566A	Mylar Capacitor 0.13μ 50V J
C140,240	0B05796A	Mylar Capacitor 0.047μ 50V J
C141,241	0B05914A	Mylar Capacitor 0.15μ 50V J
C144,244	0B09282A	Ceramic Capacitor 100P 50V K
C167,168 267,268	0B09223A	Electrolytic Capacitor 1μ 50V (LN)
	0B08714A	IC Socket 16P (4 pcs.)
	– BC Rec. Dolby NR –	
IC101,102 201,202	0B06200A	IC μA7300PC
Q101,103 104,105 106,107 201,203 204,205 206,207	0B01872A	Transistor 2SC945 (L)
ZD101,201	0B06315A	Zener Diode 6.8V YZ068
D101,201	0B00030A	Germanium Diode 1N60P
D102,105 106,202 205,206	0B06181A	Silicon Diode 1SS53
L101,201	0B03919A	Inductor 36mH
R101,201	0B09301A	Carbon Resistor 2K ERD-25T J
R102,103 117,202 203,217	0B01681A	Carbon Resistor 3.3K ERD-25T J
R104,173 204,273	0B01857A	Carbon Resistor 1K ERD-25T J
R105,122 205,222	0B09557A	Metal Film Resistor 13K SN14K2E F
R107,113 116,124 157,159 160,207 213,216 224,257 259,260	0B05641A	Carbon Resistor 47K ERD-25T J
R108,125 208,225	0B09271A	Carbon Resistor 6.2K ERD-25T J
R109,111 126,127 209,211 226,227	0B05620A	Carbon Resistor 270K ERD-25T J
R110,210	0B01683A	Carbon Resistor 15K ERD-25T J
R112,212	0B05776A	Carbon Resistor 1M ERD-25T J
R114,214	0B05622A	Carbon Resistor 2.2K ERD-25T J
R115,215	0B01846A	Carbon Resistor 4.7K ERD-25T J
R118,218	0B05560A	Carbon Resistor 18K ERD-25T J
R119,219	0B09565A	Carbon Resistor 1.6K ERD-25T J
R121,221	0B05794A	Carbon Resistor 680 ERD-25T J
R156,256	0B09558A	Metal Film Resistor 4.42K SN14K2E F
R158,258	0B05784A	Carbon Resistor 560K ERD-25T J
R161,198 261,298 710	0B01888A	Carbon Resistor 10K ERD-25T J
R162,262	0B05615A	Carbon Resistor 22K ERD-25T J
R163,263	0B01887A	Carbon Resistor 5.6K ERD-25T J
R171,271	0B05625A	Carbon Resistor 220K ERD-25T J
R701,702	0B05645A	Carbon Resistor 270 ERD-25T J
R705,706 709	0B01889A	Carbon Resistor 100K ERD-25T J
R708	0B05508A	Carbon Resistor 56K ERD-25T J
C101,201	0B09409A	PP Capacitor 1800P 100V G
C102,111 202,211	0B09240A	PP Capacitor 0.033μ 100V G
C103,112 203,212	0B05681A	Mylar Capacitor 0.01μ 50V J
C104,113 204,213	0B01862A	Electrolytic Capacitor 22μ 16V
C105,114 205,214	0B01402A	Electrolytic Capacitor 4.7μ 25V
C106,206	0B05583A	Mylar Capacitor 0.033μ 50V J
C107,151 207,251	0B01780A	Mylar Capacitor 0.1μ 50V J
C108,109 208,209	0B09567A	Electrolytic Capacitor 0.33μ 50V (LN)
C110,210	0B09594A	Mylar Capacitor 0.03μ 50V J
C115,215	0B09566A	Mylar Capacitor 0.13μ 50V J
C116,216	0B05796A	Mylar Capacitor 0.047μ 50V J
C117,217	0B05914A	Mylar Capacitor 0.15μ 50V J
C119,219 503,504	0B09223A	Electrolytic Capacitor 1μ 50V (LN)
C120,220	0B05884A	Electrolytic Capacitor 470μ 10V
C148,248	0B09163A	Electrolytic Capacitor 10μ 16V (BP)
C702	0B01412A	Electrolytic Capacitor 10μ 16V
	0B08714A	IC Socket 16P (4 pcs.)
	– Miscellaneous –	
	0B07986B	Dolby NR P.C.B.

7.10.2.1. Playback Dolby NR P.C.B. Ass'y (Serial Nos.: A12101001 – A12102101)

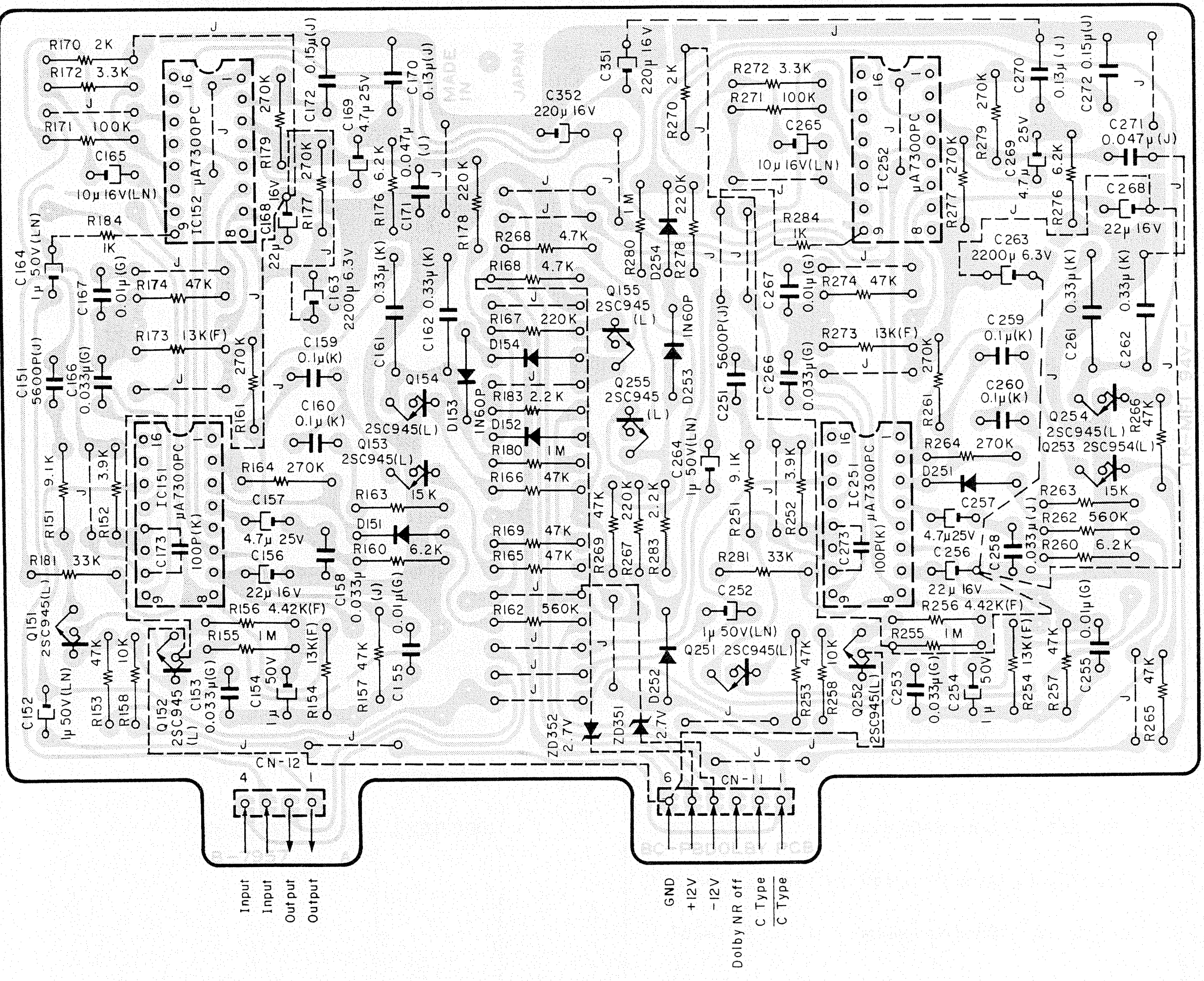

R170 2K
R172 3.3K
R171 100K
C165
10μ 16V(LN)
R184
1K
C164 1μ 50V(LN)
C167 0.01μ(G)
R174 47K
R173 13K(F)
C151 5600P(J)
C166 0.033μ(G)
IC152 μA7300PC
IC151 μA7300PC
C172 0.15μ(J)
C169 4.7μ 25V
C170 0.13μ(J)
R179 270K
R177 270K
C168 22μ 16V
C163 2200μ 6.3V
R176 6.2K
C171 0.047μ (J)
R178 220K
C159 0.1μ(K)
C160 0.1μ(K)
C161 0.33μ(K)
C162 0.33μ(K)
R161 270K
Q154 2SC945(L)
Q153 2SC945(L)
D153 1N60P
R164 270K
C157 4.7μ 25V
C156 22μ 16V
C173 100P(K)
R151 9.1K
R152 3.9K
R181 33K
R163 15K
D151
R160 6.2K
C158 0.033μ
C155 0.01μ(G)
R156 4.42K(F)
R155 1M
Q151 2SC945(L)
Q152 2SC945(L)
C152 1μ 50V(LN)
R153 47K
R158 10K
C153 0.033μ(G)
C154 1μ 50V
R154 13K(F)
R157 47K
CN-12
Input
Input
Output
Output
C352 220μ 16V
C351 220μ 16V
R270 2K
R268 4.7K
R168 4.7K
R167 220K
D154
R183 2.2K
D152
R180 1M
R166 47K
R169 47K
R165 47K
R162 560K
R280 1M
D254
R278 220K
Q155 2SC945 (L)
Q255 2SC945 (L)
D253 1N60P
C264 1μ 50V(LN)
R269 47K
R267 220K
R283 2.2K
ZD352 2.7V
ZD351
D252 2.7V
C252 1μ 50V(LN)
Q251 2SC945(L)
CN-11
GND
+12V
-12V
Dolby NR off
C Type
C Type
R272 3.3K
R271 100K
C265 10μ 16V(LN)
R284 1K
C267 0.01μ(G)
R274 47K
R273 13K(F)
C251 5600P(J)
C266 0.033μ(G)
IC252 μA7300PC
IC251 μA7300PC
R277 270K
R279 270K
C269 4.7μ 25V
C270 0.13μ(J)
C272 0.15μ(J)
C271 0.047μ(J)
R276 6.2K
C268 22μ 16V
C263 2200μ 6.3V
C259 0.1μ(K)
C260 0.1μ(K)
C261 0.33μ(K)
C262 0.33μ(K)
R261 270K
Q254 2SC945(L)
Q253 2SC954(L)
R266 47K
R264 270K
D251
C257 4.7μ 25V
R263 15K
R262 560K
R260 6.2K
C258 0.033μ(J)
C256 22μ 16V
R256 4.42K(F)
R255 1M
R251 9.1K
R252 3.9K
R281 33K
C273 100P(K)
Q252 2SC945(L)
R253 47K
R258 10K
C253 0.033μ(G)
C254 1μ 50V
R254 13K(F)
R257 47K
C255 0.01μ(G)
R265 47K
MADE IN JAPAN

Fig. 7.10.2.1 Serial Nos.: A12101001 – A12102101

Note: Diode is 1SS53 unless otherwise specified.

Schematic Ref. No.	Part No.	Description
	BA04403A	**Playback Dolby NR P.C.B. Ass'y** Serial Nos.: A12101001 — A12102101
	0B07957A	Playback Dolby NR P.C.B.
IC151,152 251,252	0B06200A	IC μA7300PC
Q151,152 153,154 155,251 252,253 254,255	0B01872A	Transistor 2SC945 (L)
ZD351,352	0B06191A	Zener Diode 2.7V 2.7EB
D151,152 154,251 252,254	0B01909A	Silicon Diode 1S1555
D153,253	0B00030A	Germanium Diode 1N60P
R151,251	0B05694A	Carbon Resistor 9.1K ERD-25T J
R152,252	0B05675A	Carbon Resistor 3.9K ERD-25T J
R153,157 165,166 169,174 253,257 265,266 269,274	0B05641A	Carbon Resistor 47K ERD-25T J
R154,173 254,273	0B09557A	Metal Film Resistor 13K SN14K2E F
R155,180 255,280	0B05776A	Carbon Resistor 1M ERD-25T J
R156,256	0B09558A	Metal Film Resistor 4.42K SN14K2E F
R158,258	0B01888A	Carbon Resistor 10K ERD-25T J
R160,176 260,276	0B09271A	Carbon Resistor 6.2K ERD-25T J
R161,164 177,179 261,264 277,279	0B05620A	Carbon Resistor 270K ERD-25T J
R162,262	0B05784A	Carbon Resistor 560K ERD-25T J
R163,263	0B01683A	Carbon Resistor 15K ERD-25T J
R167,178 267,278	0B05625A	Carbon Resistor 220K ERD-25T J
R168,268	0B01846A	Carbon Resistor 4.7K ERD-25T J
R170,270	0B09301A	Carbon Resistor 2K ERD-25T J
R171,271	0B01889A	Carbon Resistor 100K ERD-25T J
R172,272	0B01681A	Carbon Resistor 3.3K ERD-25T J
R181,281	0B05509A	Carbon Resistor 33K ERD-25T J
R183,283	0B05622A	Carbon Resistor 2.2K ERD-25T J
R184,284	0B01857A	Carbon Resistor 1K ERD-25T J
C151,251	0B05659A	Mylar Capacitor 5600P 50V J
C152,164 252,264	0B09223A	Electrolytic Capacitor 1μ 50V (LN)
C153,166 253,266	0B09240A	PP Capacitor 0.033μ 100V G
C154,254	0B01405A	Electrolytic Capacitor 1μ 50V
C155,167 255,267	0B09312A	PP Capacitor 0.01μ 100V G
C156,168 256,268	0B01862A	Electrolytic Capacitor 22μ 16V
C157,169 257,269	0B01402A	Electrolytic Capacitor 4.7μ 25V
C158,258	0B05583A	Mylar Capacitor 0.033μ 50V J
C159,160 259,260	0B01603A	Mylar Capacitor 0.1μ 50V K
C161,162 261,262	0B09399A	Mylar Capacitor 0.33μ 100V K
C163,263	0B09257A	Electrolytic Capacitor 2200μ 6.3V
C165,265	0B09148A	Electrolytic Capacitor 10μ 16V (LN)
C170,270	0B09566A	Mylar Capacitor 0.13μ 50V J
C171,271	0B05796A	Mylar Capacitor 0.047μ 50V J
C172,272	0B05914A	Mylar Capacitor 0.15μ 50V J
C173,273	0B09282A	Ceramic Capacitor 100P 50V K
C351,352	0B01398A	Electrolytic Capacitor 220μ 16V
CN11	0B08728A	6P-S Connector
CN12	0B08801A	4P-S Connector
	0B08714A	IC Socket 16P (4 pcs.)

7.10.2.2. Record Dolby NR P.C.B. Ass'y (Serial Nos.: A12101001 – A12102101)

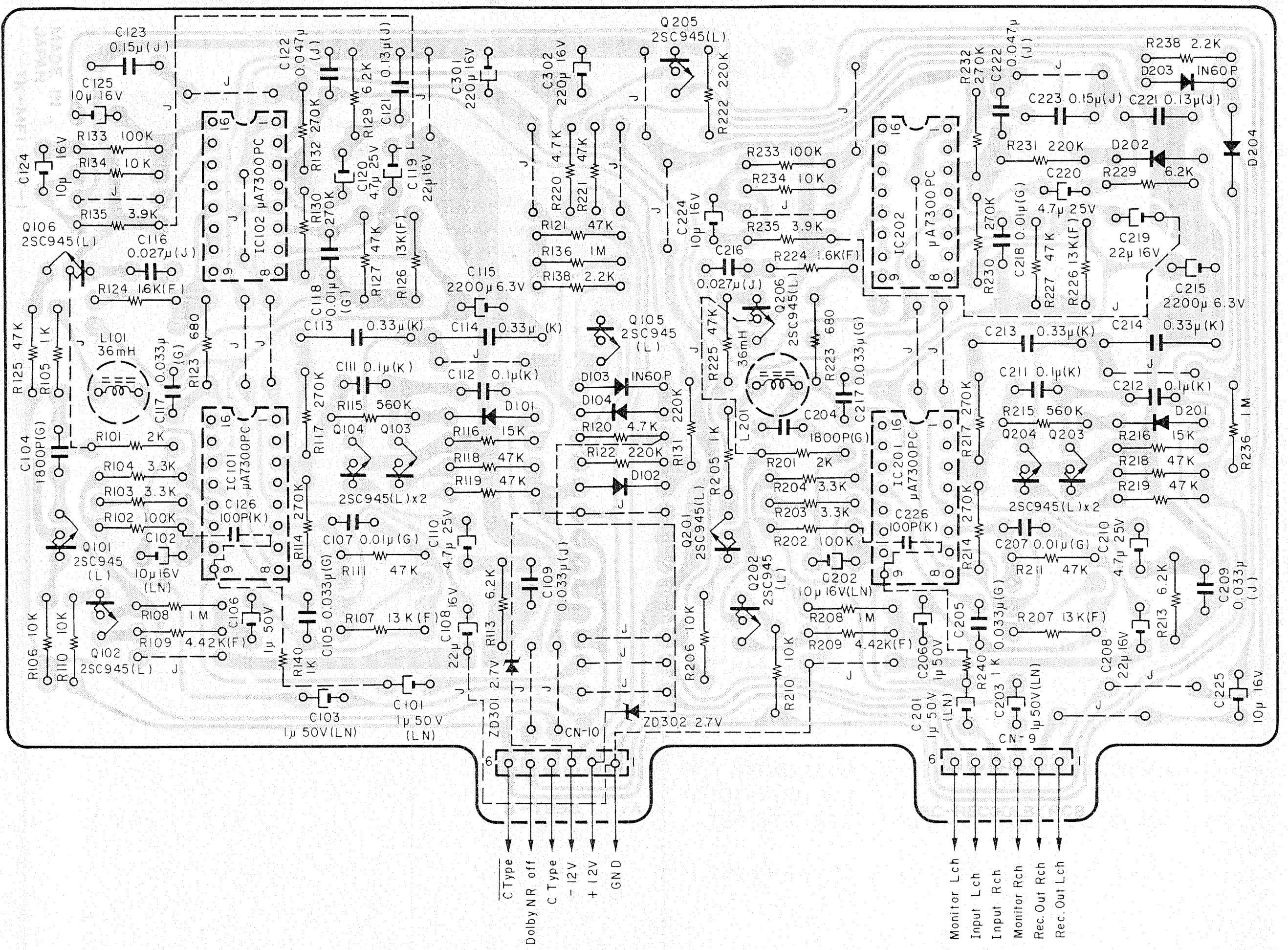

C123 0.15μ(J)
C125 10μ 16V
C124 10μ 16V
R133 100K
R134 10K
R135 3.9K
Q106 2SC945(L)
C116 0.027μ(J)
R124 16K(F)
IC102 μA7300PC
R132 270K
C122 0.047μ (J)
R129 6.2K
C121 0.13μ(J)
R130 270K
C120 47μ 25V
C119 22μ16V
C118 0.01μ (G)
R127 47K
R126 13K(F)
C301 220μ 16V
C302 220μ 16V
R220 4.7K
R221 47K
R121 47K
R136 1M
R138 2.2K
C115 2200μ 6.3V
Q205 2SC945(L)
R222 220K
C224 10μ 16V
C216 0.027μ(J)
R233 100K
R234 10K
R235 3.9K
R224 1.6K(F)
IC202 μA7300 PC
R232 270K
C222 0.047μ (J)
C223 0.15μ(J)
C221 0.13μ(J)
R238 2.2K
D203 1N60P
D202
D204
R231 220K
C220 4.7μ 25V
R229 6.2K
R230 270K
C218 0.01μ(G)
R227 47K
R226 13K(F)
C219 22μ 16V
C215 2200μ 6.3V
R125 47K
R105 1K
L101 36mH
C117 0.033μ (G)
R123 680
C113 0.33μ(K)
C114 0.33μ (K)
Q105 2SC945 (L)
R225 47K
L201 36mH
Q206 2SC945(L)
R223 680
C217 0.033μ(G)
C213 0.33μ(K)
C214 0.33μ(K)
C104 1800P(G)
R101 2K
R104 3.3K
R103 3.3K
R102 100K
IC101 μA7300PC
C126 100P(K)
R117 270K
C111 0.1μ(K)
R115 560K
Q104 Q103
2SC945(L)x2
C112 0.1μ(K)
D101
R116 15K
R118 47K
R119 47K
D103 1N60P
D104
R120 4.7K
R122 220K
D102
R131 220K
R205 1K
C204 1800P(G)
R201 2K
R204 3.3K
R203 3.3K
IC201 μA7300PC
C226 100P(K)
R217 270K
C211 0.1μ(K)
R215 560K
Q204 Q203
2SC945(L)x2
C212 0.1μ(K)
D201
R216 15K
R218 47K
R219 47K
R236 1M
Q101 2SC945 (L)
C102 10μ16V (LN)
R114 270K
C107 0.01μ(G)
R111 47K
C110 4.7μ 25V
C109 0.033μ(J)
Q201 2SC945(L)
R202 100K
C202 10μ 16V(LN)
R214 270K
C207 0.01μ(G)
R211 47K
C210 4.7μ 25V
R213 6.2K
C209 0.033μ (J)
R106 10K
R110 10K
Q102 2SC945(L)
R108 1M
R109 4.42K(F)
C106 1μ 50V
C105 0.033μ(G)
R107 13K(F)
C108 22μ 16V
R113 6.2K
R140 1K
C103 1μ 50V(LN)
C101 1μ 50V (LN)
ZD301 2.7V
CN-10
ZD302 2.7V
Q202 2SC945 (L)
R206 10K
R210 10K
R208 1M
R209 4.42K(F)
C206 1μ 50V
C205 0.033μ(G)
R240 1K
R207 13K(F)
C208 22μ 16V
C201 1μ 50V (LN)
C203 1μ 50V(LN)
CN-9
C225 10μ 16V
J
6
1
CType
Dolby NR off
C Type
– 12V
+ 12V
GND
Monitor Lch
Input Lch
Input Rch
Monitor Rch
Rec.Out Rch
Rec.Out Lch

Fig. 7.10.2.2 Serial Nos.: A12101001 – A12102101

Note: Diode is 1SS53 unless otherwise specified.

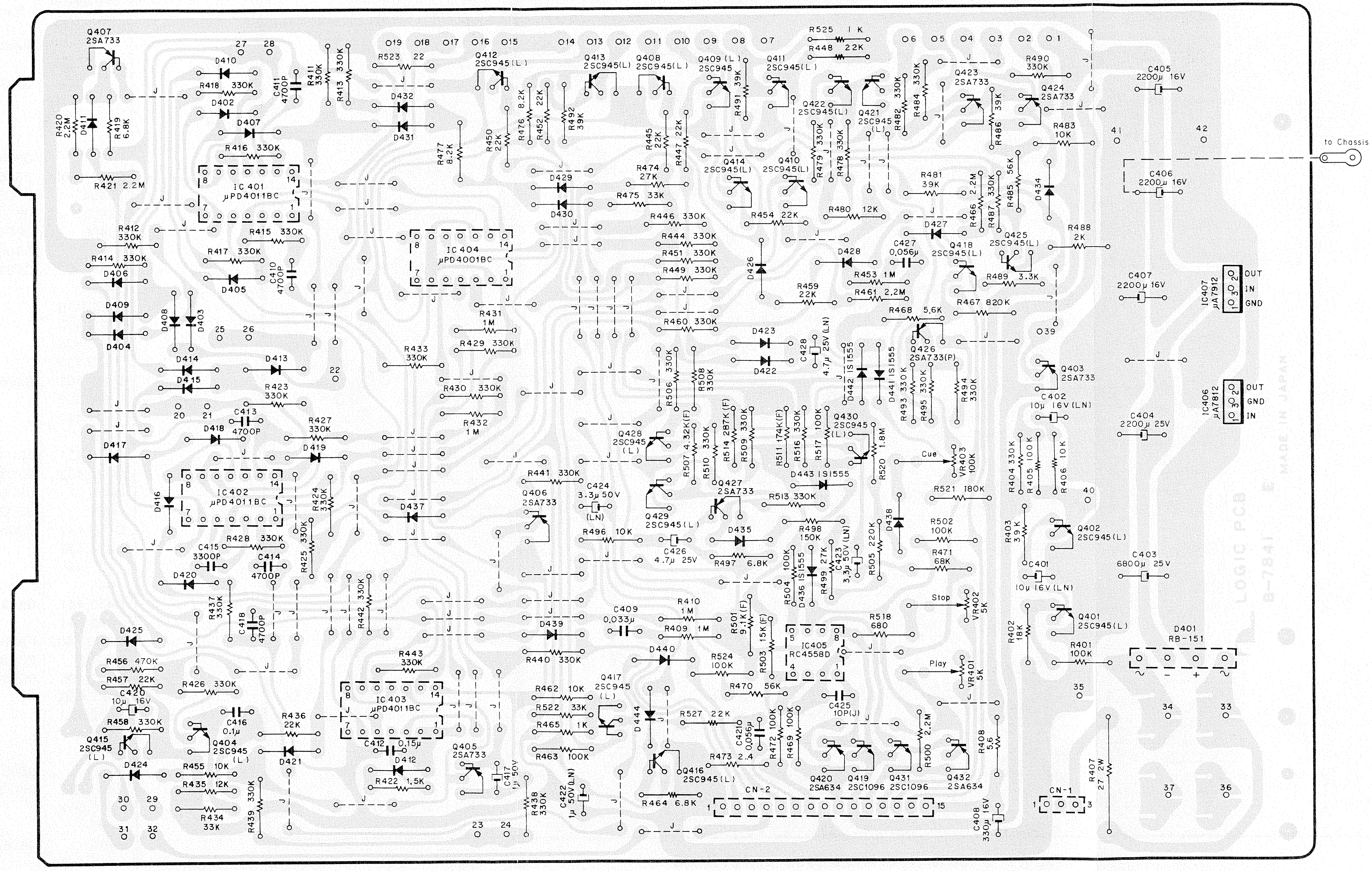
Schematic Ref. No.	Part No.	Description
	BA04404A	**Record Dolby NR P.C.B. Ass'y** Serial Nos.: A12101001 – A12102101
	0B07958A	Record Dolby NR P.C.B.
IC101,102 201,202	0B06200A	IC μA7300PC
Q101-106 201-206	0B01872A	Transistor 2SC945 (L) (12 pcs.)
ZD301,302	0B06191A	Zener Diode 2.7V 2.7EB
D101,102 104,201 202,204	0B01909A	Silicon Diode 1S1555
D103,203	0B00030A	Germanium Diode 1N60P
L101,201	0B03919B	Inductor 36mH
R101,201	0B09301A	Carbon Resistor 2K ERD-25T J
R102,133 202,233	0B01889A	Carbon Resistor 100K ERD-25T J
R103,104 203,204	0B01681A	Carbon Resistor 3.3K ERD-25T J
R105,140 205,240	0B01857A	Carbon Resistor 1K ERD-25T J
R106,110 134,206 210,234	0B01888A	Carbon Resistor 10K ERD-25T J
R107,126 207,226	0B09557A	Metal Film Resistor 13K SN14K2E F
R108,136 208,236	0B05776A	Carbon Resistor 1M ERD-25T J
R109,209	0B09558A	Metal Film Resistor 4.42K SN14K2E F
R111,118 119,121 125,127 211,218 219,221 225,227	0B05641A	Carbon Resistor 47K ERD-25T J
R113,129 213,229	0B09271A	Carbon Resistor 6.2K ERD-25T J
R114,117 130,132 214,217 230,232	0B05620A	Carbon Resistor 270K ERD-25T J
R115,215	0B05784A	Carbon Resistor 560K ERD-25T J
R116,216	0B01683A	Carbon Resistor 15K ERD-25T J
R120,220	0B01846A	Carbon Resistor 4.7K ERD-25T J
R122,131 222,231	0B05625A	Carbon Resistor 220K ERD-25T J
R123,223	0B05794A	Carbon Resistor 680 ERD-25T J
R124,224	0B09565A	Metal Film Resistor 1.6K SN14K2E F
R135,235	0B05675A	Carbon Resistor 3.9K ERD-25T J
R138,238	0B05622A	Carbon Resistor 2.2K ERD-25T J
C101,103 201,203	0B09223A	Electrolytic Capacitor 1μ 50V (LN)
C102,202	0B09148A	Electrolytic Capacitor 10μ 16V (LN)
C104,204	0B09409A	PP Capacitor 1800P 100V G
C105,117 205,217	0B09240A	PP Capacitor 0.033μ 100V G
C106,206	0B01405A	Electrolytic Capacitor 1μ 50V
C107,118 207,218	0B09312A	PP Capacitor 0.01μ 100V G
C108,119 208,219	0B01862A	Electrolytic Capacitor 22μ 16V
C109,209	0B05583A	Mylar Capacitor 0.033μ 50V J
C110,120 210,220	0B01402A	Electrolytic Capacitor 4.7μ 25V
C111,112 211,212	0B01603A	Mylar Capacitor 0.1μ 50V K
C113,114 213,214	0B09399A	Mylar Capacitor 0.33μ 100V K
C115,215	0B09257A	Electrolytic Capacitor 2200μ 6.3V
C116,216	0B09045A	Mylar Capacitor 0.027μ 50V J
C121,221	0B09566A	Mylar Capacitor 0.13μ 50V J
C122,222	0B05796A	Mylar Capacitor 0.047μ 50V J
C123,223	0B05914A	Mylar Capacitor 0.15μ 50V J
C124,125 224,225	0B01412A	Electrolytic Capacitor 10μ 16V
C126,226	0B09282A	Ceramic Capacitor 100P 50V K
C301,302	0B01398A	Electrolytic Capacitor 220μ 16V
CN9,10	0B08728A	6P-S Connector
	0B08714A	IC Socket 16P (4 pcs.)

Schematic Ref. No.	Part No.	Description
	BA04509A	**Logic P.C.B. Ass'y (U.S.A., Canada, Japan & Others)**
	BA04514A	**Logic P.C.B. Ass'y (220V Class 2, UK & Australia)**
		Serial No.: A12103654 –
	0B07841E	Logic P.C.B.
IC401-403	0B06178A	IC μPD4011BC (3 pcs.)
IC404	0B06143A	IC μPD4001BC
IC405	0B06124B	IC RC4558D
IC406	0B06192A	Regulator +12V μA7812PC
IC407	0B06193A	Regulator –12V μA7912PC
Q401,402 404 408-418 421,422 425,428 429,430	0B01872A	Transistor 2SC945 (L) (20 pcs.)
Q403,405 406,407 423,424 427	0B06013A	Transistor 2SA733
Q419,431	0B06020A	Transistor 2SC1096
Q420,432	0B06012A	Transistor 2SA634
Q426	0B06155A	Transistor 2SA733 (P)
D401	0B06183A	Diode Bridge RB-151
D402-432 434,435 437-440 444	0B06181A	Silicon Diode 1SS53 (38 pcs.)
D436,441 442,443	0B01909A	Silicon Diode 1S1555
VR401,402	0B03831A	Semi-fixed Volume 5K
VR403	0B03832A	Semi-fixed Volume 100K
R401,405 463,469 472,502 504,517 524	0B01889A	Carbon Resistor 100K ERD-25T J
R402	0B05560A	Carbon Resistor 18K ERD-25T J
R403,481 486,491 492	0B01854A	Carbon Resistor 39K ERD-25T J
R404 411-418 423-430 433 437-444 446,449 451,458 460,478 479,482 484,487 490,493 494,495 506,508 509,510 513,516	0B05627A	Carbon Resistor 330K ERD-25T J (46 pcs.)
R406,455 462,483 496	0B01888A	Carbon Resistor 10K ERD-25T J
R407	0B09575A	Fail Safe Type Resistor 27 RSF-2B J
R408	0B05940A	Fail Safe Type Resistor 5.6 ERD-14F J

Schematic Ref. No.	Part No.	Description
R409,410 431,432 453	0B05776A	Carbon Resistor 1M ERD-25T J
R419,464 497	0B01682A	Carbon Resistor 6.8K ERD-25T J
R420,421 461,466 500	0B05671A	Carbon Resistor 2.2M ERD-25T J
R422	0B05698A	Carbon Resistor 1.5K ERD-25T J
R434,475 522	0B05509A	Carbon Resistor 33K ERD-25T J
R435,480	0B09263A	Carbon Resistor 12K ERD-25T J
R436,445 447,448 450,452 454,457 459,527	0B05615A	Carbon Resistor 22K ERD-25T J
R456	0B01684A	Carbon Resistor 470K ERD-25T J
R465,525	0B01857A	Carbon Resistor 1K ERD-25T J
R467	0B09320A	Carbon Resistor 820K ERD-25T J
R468	0B01887A	Carbon Resistor 5.6K ERD-25T J
R470,485	0B05508A	Carbon Resistor 56K ERD-25T J
R471	0B05692A	Carbon Resistor 68K ERD-25T J
R473	0B09580A	Fail Safe Type Resistor 2.4 RDF-25S J
R474,499	0B05743A	Carbon Resistor 27K ERD-25T J
R476,477	0B01856A	Carbon Resistor 8.2K ERD-25T J
R488	0B09301A	Carbon Resistor 2K ERD-25T J
R489	0B01681A	Carbon Resistor 3.3K ERD-25T J
R498	0B05626A	Carbon Resistor 150K ERD-25T J
R501	0B09328A	Metal Film Resistor 9.1K SN14K2E F
R503	0B09340A	Metal Film Resistor 15K SN14K2E F
R505	0B05625A	Carbon Resistor 220K ERD-25T J
R507	0B09365A	Metal Film Resistor 4.32K SN14K2E F
R511	0B09367A	Metal Film Resistor 174K SN14K2E F
R514	0B09366A	Metal Film Resistor 287K SN14K2E F
R518	0B05794A	Carbon Resistor 680 ERD-25T J
R520	0B05680A	Carbon Resistor 1.8M ERD-25T J
R521	0B05640A	Carbon Resistor 180K ERD-25T J
R523	0B09049A	Fail Safe Type Resistor 22 RDF-25S J
C401,402	0B09148A	Electrolytic Capacitor 10μ 16V (LN)
C403	0B09374A	Electrolytic Capacitor 6800μ 25V
C404	0B05654A	Electrolytic Capacitor 2200μ 25V
C405,406 407	0B01406A	Electrolytic Capacitor 2200μ 16V
C408	0B01502A	Electrolytic Capacitor 330μ 16V
C409	0B05513A	Mylar Capacitor 0.033μ 50V
C410,411 413,414 418	0B05556A	Mylar Capacitor 4700P 50V
C412	0B09171A	Mylar Capacitor 0.15μ 50V
C415	0B09166A	Mylar Capacitor 3300P 50V
C416	0B00093A	Mylar Capacitor 0.1μ 50V
C417	0B01405A	Electrolytic Capacitor 1μ 50V
C420	0B01412A	Electrolytic Capacitor 10μ 16V
C421,427	0B01676A	Mylar Capacitor 0.056μ 50V
C422	0B09223A	Electrolytic Capacitor 1μ 50V (LN)
C423,424	0B09147A	Electrolytic Capacitor 3.3μ 50V (LN)
C425	0B09277A	Ceramic Capacitor 10P 50V J
C426	0B01402A	Electrolytic Capacitor 4.7μ 25V
C428	0B09333A	Electrolytic Capacitor 4.7μ 25V (LN)
CN1	0B08184A	3P-S Post
CN2	0B08579A	15P-S Post
	0B08568B	Heat Sink (1 pce.)

Schematic Ref. No.	Part No.	Description
	0B08603A	Transistor Mica TO-220 (1 pce.)
	0B08604A	Transistor Bushing TO-220 (1 pce.)
	0E00607A	Screw M3x8 Philips Pan Head (2 pcs.)
	0E00507A	Nut Hex. M3 (2 pcs.)
	0E00857A	BT Screw M3x6 Philips Binding Head (2 pcs.)
	0E00037A	Earth Lug B-5 (1 pce.)
*	0B08349A	Fuse Clip (4 pcs.)
*	0B08347U	Fuse T 1A 250V (2 pcs.)
*	0M04131B	Fuse Label T 1A (1 pce.)
		*: Included only in Logic P.C.B. Ass'y (BA04514A).

7.11. Logic P.C.B. Ass'y



IC401 μPD4011BC
IC402 μPD4011BC
IC403 μPD4011BC
IC404 μPD4001BC
IC405 RC4558D
IC406 μA7812
IC407 μA7912
D401 RB-151
CN-1
CN-2
C405 2200μ 16V
C406 2200μ 16V
C407 2200μ 16V
C404 2200μ 25V
C403 6800μ 25V
to Chassis
OUT
IN
GND
Cue
Stop
Play
VR401 5K
VR402 5K
VR403 100K
Q401 2SC945(L)
Q402 2SC945(L)
Q403 2SA733
Q407 2SA733
Q415 2SC945 (L)
Q416 2SC945(L)
Q417 2SC945 (L)
Q420 2SA634
Q419 2SC1096
Q431 2SC1096
Q432 2SA634
D443 1S1555
D441 1S1555
D442 1S1555
D436 1S1555
R525 1K
R448 2.2K
LOGIC PCB
B-7841 E
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Fig. 7.11.1 Serial No.: A12103654 –

Note: Diode is 1SS53 unless otherwise specified.

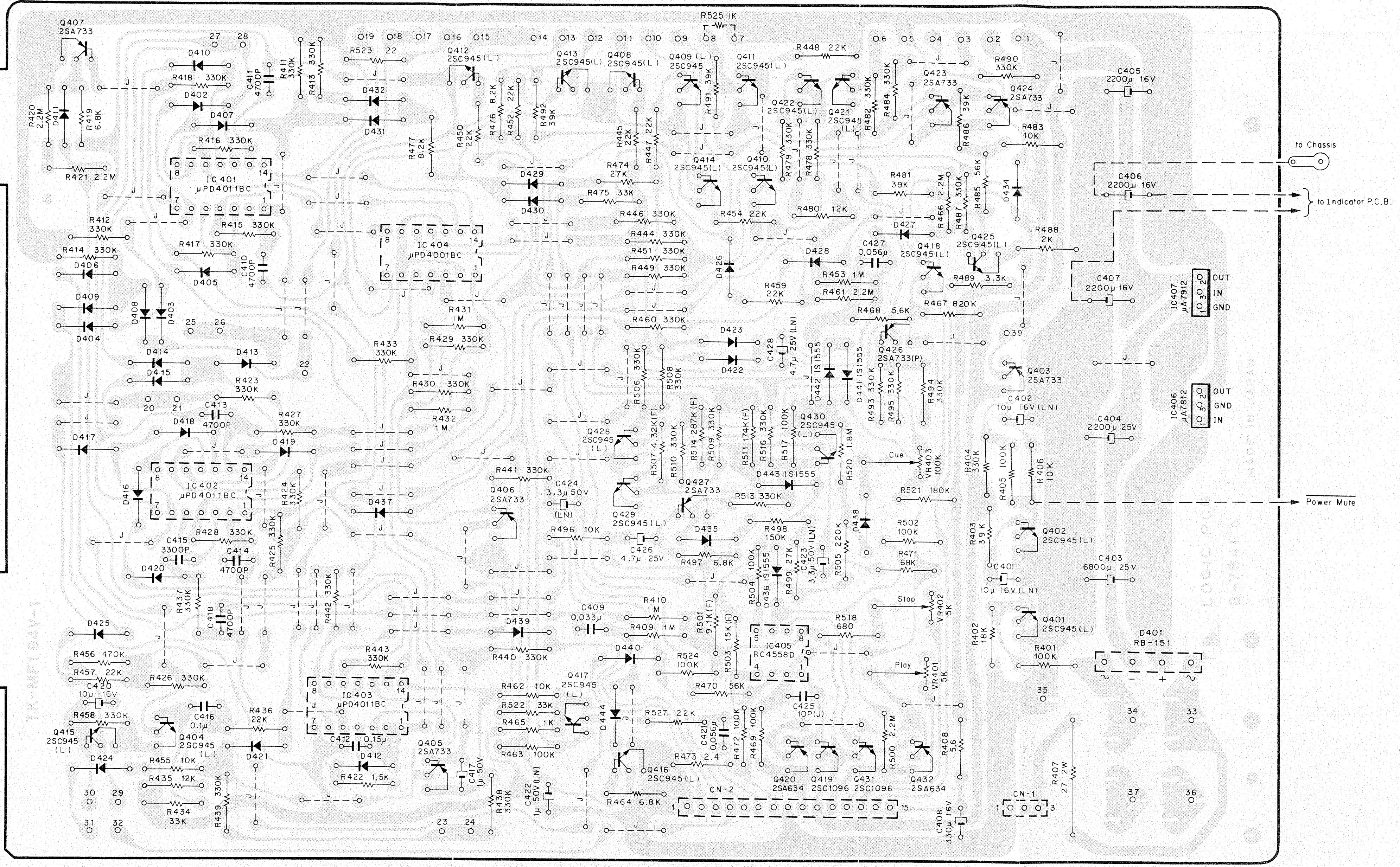
IC401
μPD4011BC
IC402
μPD4011BC
IC403
μPD4011BC
IC404
μPD4001BC
IC405
RC4558D
IC406
μA7812
IC407
μA7912
OUT
IN
GND
D401
RB-151
CN-1
CN-2
C405
2200μ 16V
C406
2200μ 16V
C407
2200μ 16V
C404
2200μ 25V
C403
6800μ 25V
C408
330μ 16V
R407
27 2W
R408
5.6
VR401
5K
VR402
5K
VR403
100K
Cue
Stop
Play
to Chassis
to Indicator P.C.B.
Power Mute
LOGIC P.C.B.
B-7841 D
MADE IN JAPAN
TK-MF104V-1

Fig. 7.11.2 Serial Nos.: A12102903 – A12103653

Note: Diode is 1SS53 unless otherwise specified.

Schematic Ref. No.	Part No.	Description
	BA04509A	**Logic P.C.B. Ass'y (U.S.A., Canada, Japan & Others)**
	BA04514A	**Logic P.C.B. Ass'y (220V Class 2, UK & Australia)** Serial Nos.: A12102903 – A12103653
	0B07841D	Logic P.C.B.
IC401-403	0B06178A	IC μPD4011BC (3 pcs.)
IC404	0B06143A	IC μPD4001BC
IC405	0B06124B	IC RC4558D
IC406	0B06192A	Regulator +12V μA7812PC
IC407	0B06193A	Regulator −12V μA7912PC
Q401,402 404 408-418 421,422 425,428 429,430	0B01872A	Transistor 2SC945 (L) (20 pcs.)
Q403,405 406,407 423,424 427	0B06013A	Transistor 2SA733
Q419,431	0B06020A	Transistor 2SC1096
Q420,432	0B06012A	Transistor 2SA634
Q426	0B06155A	Transistor 2SA733 (P)
D401	0B06183A	Diode Bridge RB-151
D402-432 434,435 437-440 444	0B06181A	Silicon Diode 1SS53 (38 pcs.)
D436,441 442,443	0B01909A	Silicon Diode 1S1555
VR401,402	0B03831A	Semi-fixed Volume 5K
VR403	0B03832A	Semi-fixed Volume 100K
R401,405 463,469 472,502 504,517 524	0B01889A	Carbon Resistor 100K ERD-25T J
R402	0B05560A	Carbon Resistor 18K ERD-25T J
R403,481 486,491 492	0B01854A	Carbon Resistor 39K ERD-25T J
R404 411-418 423-430 433 437-444 446,449 451,458 460,478 479,482 484,487 490,493 494,495 506,508 509,510 513,516	0B05627A	Carbon Resistor 330K ERD-25T J (46 pcs.)
R406,455 462,483 496	0B01888A	Carbon Resistor 10K ERD-25T J
R407	0B09575A	Fail Safe Type Resistor 27 RSF-2B J
R408	0B05940A	Fail Safe Type Resistor 5.6 ERD-14F J

Schematic Ref. No.	Part No.	Description
R409,410 431,432 453	0B05776A	Carbon Resistor 1M ERD-25T J
R419,464 497	0B01682A	Carbon Resistor 6.8K ERD-25T J
R420,421 461,466 500	0B05671A	Carbon Resistor 2.2M ERD-25T J
R422	0B05698A	Carbon Resistor 1.5K ERD-25T J
R434,475 522	0B05509A	Carbon Resistor 33K ERD-25T J
R435,480	0B09263A	Carbon Resistor 12K ERD-25T J
R436,445 447,448 450,452 454,457 459,527	0B05615A	Carbon Resistor 22K ERD-25T J
R456	0B01684A	Carbon Resistor 470K ERD-25T J
R465,525	0B01857A	Carbon Resistor 1K ERD-25T J
R467	0B09320A	Carbon Resistor 820K ERD-25T J
R468	0B01887A	Carbon Resistor 5.6K ERD-25T J
R470,485	0B05508A	Carbon Resistor 56K ERD-25T J
R471	0B05692A	Carbon Resistor 68K ERD-25T J
R473	0B09580A	Fail Safe Type Resistor 2.4 RDF-25S J
R474,499	0B05743A	Carbon Resistor 27K ERD-25T J
R476,477	0B01856A	Carbon Resistor 8.2K ERD-25T J
R488	0B09301A	Carbon Resistor 2K ERD-25T J
R489	0B01681A	Carbon Resistor 3.3K ERD-25T J
R498	0B05626A	Carbon Resistor 150K ERD-25T J
R501	0B09328A	Metal Film Resistor 9.1K SN14K2E F
R503	0B09340A	Metal Film Resistor 15K SN14K2E F
R505	0B05625A	Carbon Resistor 220K ERD-25T J
R507	0B09365A	Metal Film Resistor 4.32K SN14K2E F
R511	0B09367A	Metal Film Resistor 174K SN14K2E F
R514	0B09366A	Metal Film Resistor 287K SN14K2E F
R518	0B05794A	Carbon Resistor 680 ERD-25T J
R520	0B05680A	Carbon Resistor 1.8M ERD-25T J
R521	0B05640A	Carbon Resistor 180K ERD-25T J
R523	0B09049A	Fail Safe Type Resistor 22 RDF-25S J
C401,402	0B09148A	Electrolytic Capacitor 10μ 16V (LN)
C403	0B09374A	Electrolytic Capacitor 6800μ 25V
C404	0B05654A	Electrolytic Capacitor 2200μ 25V
C405,406 407	0B01406A	Electrolytic Capacitor 2200μ 16V
C408	0B01502A	Electrolytic Capacitor 330μ 16V
C409	0B05513A	Mylar Capacitor 0.033μ 50V
C410,411 413,414 418	0B05556A	Mylar Capacitor 4700P 50V
C412	0B09171A	Mylar Capacitor 0.15μ 50V
C415	0B09166A	Mylar Capacitor 3300P 50V
C416	0B00093A	Mylar Capacitor 0.1μ 50V
C417	0B01405A	Electrolytic Capacitor 1μ 50V
C420	0B01412A	Electrolytic Capacitor 10μ 16V
C421,427	0B01676A	Mylar Capacitor 0.056μ 50V
C422	0B09223A	Electrolytic Capacitor 1μ 50V (LN)
C423,424	0B09147A	Electrolytic Capacitor 3.3μ 50V (LN)
C425	0B09277A	Ceramic Capacitor 10P 50V J
C426	0B01402A	Electrolytic Capacitor 4.7μ 25V
C428	0B09333A	Electrolytic Capacitor 4.7μ 25V (LN)
CN1	0B08184A	3P-S Post
CN2	0B08579A	15P-S Post
	0B08568B	Heat Sink (1 pce.)
	0B08603A	Transistor Mica TO-220 (1 pce.)
	0B08604A	Transistor Bushing TO-220 (1 pce.)
	0E00607A	Screw M3x8 Philips Pan Head (2 pcs.)
	0E00507A	Nut Hex. M3 (2 pcs.)
	0E00857A	BT Screw M3x6 Philips Binding Head (2 pcs.)
	0E00037A	Earth Lug B-5 (1 pce.)
*	0B08349A	Fuse Clip (4 pcs.)
*	0B08347U	Fuse T 1A 250V (2 pcs.)
*	0M04131B	Fuse Label T 1A (1 pce.)

*: Included only in Logic P.C.B. Ass'y (BA04514A).

Schematic Ref. No.	Part No.	Description
	BA04434A	**Logic P.C.B. Ass'y (U.S.A., Canada, Japan & Others)**
	BA04435A	**Logic P.C.B. Ass'y (220V Class 2, UK & Australia)** Serial Nos.: A12101001 — A12102902
	0B07841D	Logic P.C.B.
IC401-403	0B06178A	IC μPD4011BC (3 pcs.)
IC404	0B06143A	IC μPD4001BC
IC405	0B06124B	IC RC4558D
IC406	0B06192A	Regulator +12V μA7812PC
IC407	0B06193A	Regulator −12V μA7912PC
Q401,402 404 408-418 421,422 425,428 429,430	0B01872A	Transistor 2SC945 (L) (20 pcs.)
Q403,405 406,407 423,424 427	0B06013A	Transistor 2SA733
Q419,431	0B06020A	Transistor 2SC1096
Q420,432	0B06012A	Transistor 2SA634
Q426	0B06155A	Transistor 2SA733 (P)
D401	0B06183A	Diode Bridge RB-151
D402-432 434,435 437-440 444	0B06181A	Silicon Diode 1SS53 (38 pcs.)
D436,441 442,443	0B01909A	Silicon Diode 1S1555
VR401,402	0B03831A	Semi-fixed Volume 5K
VR403	0B03832A	Semi-fixed Volume 100K
R401,405 463,469 472,502 504,517 524	0B01889A	Carbon Resistor 100K ERD-25T J
R402	0B05560A	Carbon Resistor 18K ERD-25T J
R403,481 486,491 492	0B01854A	Carbon Resistor 39K ERD-25T J
R404 411-418 423-430 433 437-444 446,449 451,458 460,478 479,482 484,487 490,493 494,495 506,508 509,510 513,516	0B05627A	Carbon Resistor 330K ERD-25T J (46 pcs.)
R406,455 462,483 496	0B01888A	Carbon Resistor 10K ERD-25T J
R407	0B09575A	Fail Safe Type Resistor 27 RSF-2B J
R408	0B05940A	Fail Safe Type Resistor 5.6 ERD-14F J

Schematic Ref. No.	Part No.	Description
R409,410 431,432 453	0B05776A	Carbon Resistor 1M ERD-25T J
R419,464 497	0B01682A	Carbon Resistor 6.8K ERD-25T J
R420,421 461,466 500	0B05671A	Carbon Resistor 2.2M ERD-25T J
R422	0B05698A	Carbon Resistor 1.5K ERD-25T J
R434,475 522	0B05509A	Carbon Resistor 33K ERD-25T J
R435,480	0B09263A	Carbon Resistor 12K ERD-25T J
R436,445 447,448 450,452 454,457 459	0B05615A	Carbon Resistor 22K ERD-25T J
R456	0B01684A	Carbon Resistor 470K ERD-25T J
R465,525	0B01857A	Carbon Resistor 1K ERD-25T J
R467	0B09320A	Carbon Resistor 820K ERD-25T J
R468	0B01887A	Carbon Resistor 5.6K ERD-25T J
R470,485	0B05508A	Carbon Resistor 56K ERD-25T J
R471	0B05692A	Carbon Resistor 68K ERD-25T J
R473	0B09381A	Fail Safe Type Resistor 2 RDF-25S J
R474,499	0B05743A	Carbon Resistor 27K ERD-25T J
R476,477	0B01856A	Carbon Resistor 8.2K ERD-25T J
R488	0B09301A	Carbon Resistor 2K ERD-25T J
R489	0B01681A	Carbon Resistor 3.3K ERD-25T J
R498	0B05626A	Carbon Resistor 150K ERD-25T J
R501	0B09328A	Metal Film Resistor 9.1K SN14K2E F
R503	0B09340A	Metal Film Resistor 15K SN14K2E F
R505	0B05625A	Carbon Resistor 220K ERD-25T J
R507	0B09365A	Metal Film Resistor 4.32K SN14K2E F
R511	0B09367A	Metal Film Resistor 174K SN14K2E F
R514	0B09366A	Metal Film Resistor 287K SN14K2E F
R518	0B05794A	Carbon Resistor 680 ERD-25T J
R520	0B05680A	Carbon Resistor 1.8M ERD-25T J
R521	0B05640A	Carbon Resistor 180K ERD-25T J
R523	0B09049A	Fail Safe Type Resistor 22 RDF-25S J
C401,402	0B09148A	Electrolytic Capacitor 10μ 16V (LN)
C403	0B09374A	Electrolytic Capacitor 6800μ 25V
C404	0B05654A	Electrolytic Capacitor 2200μ 25V
C405,406 407	0B01406A	Electrolytic Capacitor 2200μ 16V
C408	0B01502A	Electrolytic Capacitor 330μ 16V
C409	0B05513A	Mylar Capacitor 0.033μ 50V
C410,411 413,414 418	0B05556A	Mylar Capacitor 4700P 50V
C412	0B09171A	Mylar Capacitor 0.15μ 50V
C415	0B09166A	Mylar Capacitor 3300P 50V
C416	0B00093A	Mylar Capacitor 0.1μ 50V
C417	0B01405A	Electrolytic Capacitor 1μ 50V
C420	0B01412A	Electrolytic Capacitor 10μ 16V
C421,427	0B01676A	Mylar Capacitor 0.056μ 50V
C422	0B09223A	Electrolytic Capacitor 1μ 50V (LN)
C423,424	0B09147A	Electrolytic Capacitor 3.3μ 50V (LN)
C425	0B09277A	Ceramic Capacitor 10P 50V J
C426	0B01402A	Electrolytic Capacitor 4.7μ 25V
C428	0B09333A	Electrolytic Capacitor 4.7μ 25V (LN)
CN1	0B08184A	3P-S Post
CN2	0B08579A	15P-S Post
	0B08568B	Heat Sink (1 pce.)

Schematic Ref. No.	Part No.	Description	
	0B08603A	Transistor Mica TO-220	(1 pce.)
	0B08604A	Transistor Bushing TO-220	(1 pce.)
	0E00607A	Screw M3x8 Philips Pan Head	(2 pcs.)
	0E00507A	Nut Hex. M3	(2 pcs.)
	0E00857A	BT Screw M3x6 Philips Binding Head	(2 pcs.)
	0E00037A	Earth Lug B-5	(1 pce.)
*	0B08349A	Fuse Clip	(4 pcs.)
*	0B08347U	Fuse T 1A 250V	(2 pcs.)
*	0M04131B	Fuse Label T 1A	(1 pce.)

*: Included only in Logic P.C.B. Ass'y (BA04435A).

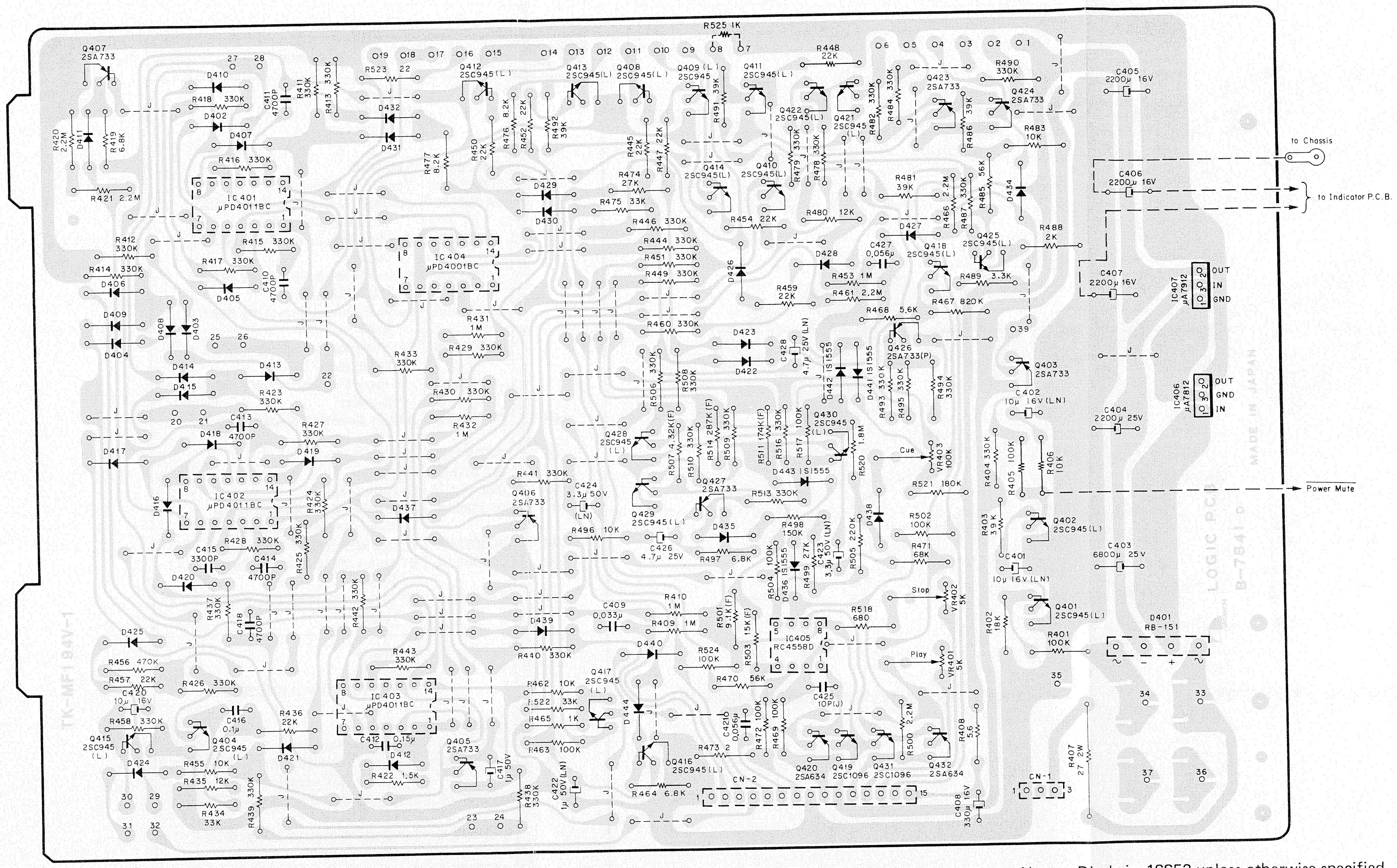
to Chassis
to Indicator P.C.B.
Power Mute
IC401 μPD4011BC
IC402 μPD4011BC
IC403 μPD4011BC
IC404 μPD4001BC
IC405 RC4558D
IC406 μA7812
IC407 μA7912
OUT
IN
GND
CN-1
CN-2
Cue
Stop
Play
VR401 5K
VR402 5K
VR403 100K
D401 RB-151
C405 2200μ 16V
C406 2200μ 16V
C407 2200μ 16V
C404 2200μ 25V
C403 6800μ 25V
R525 1K
TK-MF1 94V-1
LOGIC PC B-7841 D
MADE IN JAPAN

Fig. 7.11.3 Serial Nos.: A12101001 – A12102902

Note: Diode is 1SS53 unless otherwise specified.

8. MECHANISM ASS'Y AND PARTS LIST

8.1. Synthesis

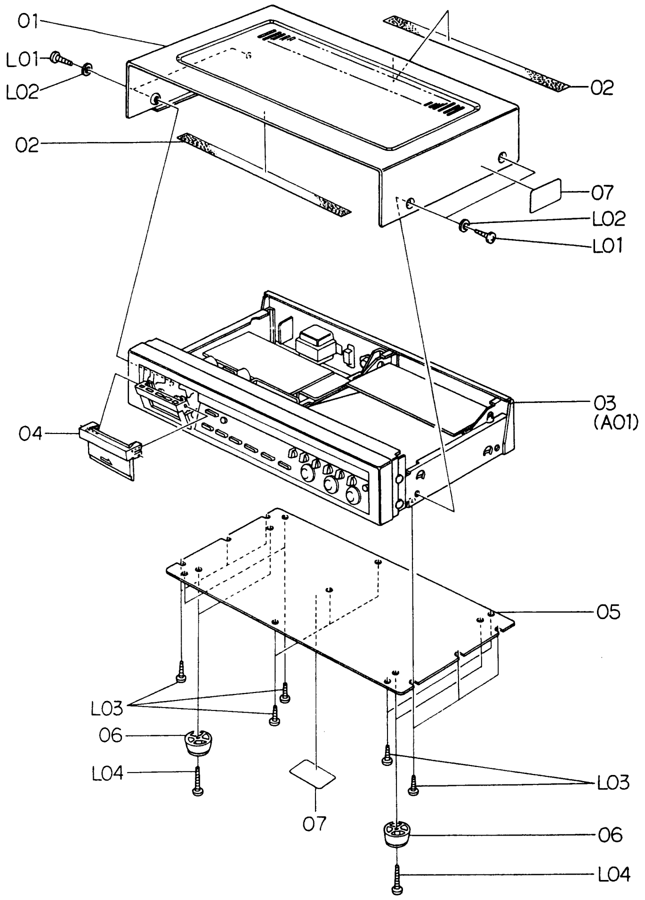

Fig. 8.1.1 Serial No.: A12102102 –

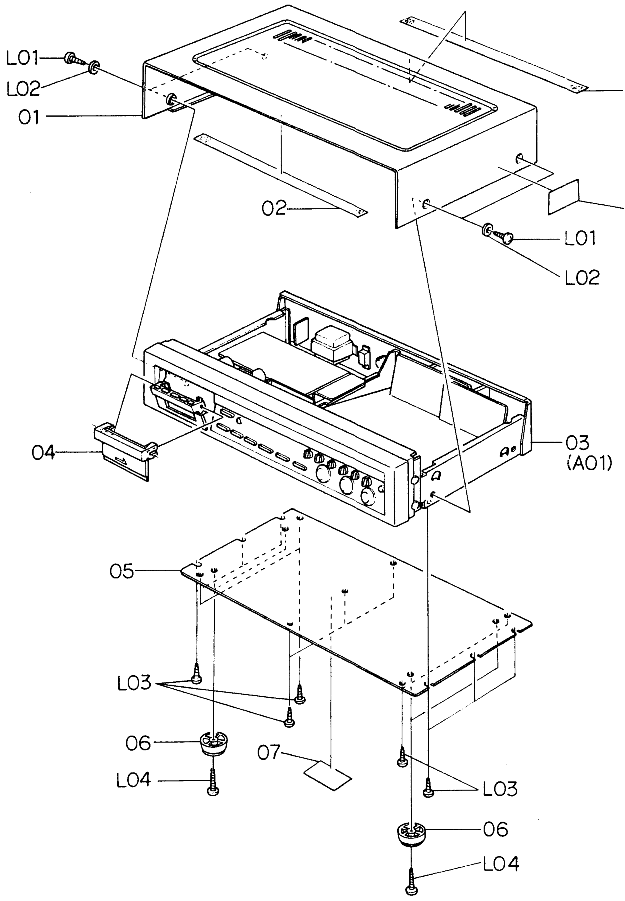

Fig. 8.1.2 Serial Nos.: A12101001 – A12102101

Schematic Ref. No.	Part No.	Description	Q'ty
		Synthesis Serial No.: A12102903 –	
01	0H03681C	Top Cover	1
02	0H03580B	Top Cover Himelon	2
03	JA03826B	Synthesis Mechanism Ass'y 582Z (U.S.A. & Canada)	1
	JA03827B	Synthesis Mechanism Ass'y 582Z (Japan)	1
	JA03830B	Synthesis Mechanism Ass'y 582Z (220V Class 2)	1
	JA03825B	Synthesis Mechanism Ass'y 582Z (UK)	1
	JA03829B	Synthesis Mechanism Ass'y 582Z (Australia)	1
	JA03828B	Synthesis Mechanism Ass'y 582Z (Others)	1
04	0H03689B	Acrylic Cassette Compartment Cover	1
05	0J03972B	Bottom Cover	1
06	0J03825A	Leg S	4
07	0M04101B	Caution Label	2
L01	0E00858A	BT Screw M4x6 Philips Binding Head (Black Chromate)	4
L02	0E00736A	Washer 4mm (Black Chromate)	4
L03	0E00857A	BT Screw M3x6 Philips Binding Head	13
L04	0E00852A	BT Screw M4x12 Philips Binding Head	4
		Synthesis Serial Nos.: A12101001 – A12102902	
01	0H03681C	Top Cover	1
02	0H03580B	Top Cover Himelon	2
03	JA03826A	Synthesis Mechanism Ass'y 582Z (U.S.A. & Canada)	1
	JA03827A	Synthesis Mechanism Ass'y 582Z (Japan)	1
	JA03830A	Synthesis Mechanism Ass'y 582Z (220V Class 2)	1
	JA03825A	Synthesis Mechanism Ass'y 582Z (UK)	1
	JA03829A	Synthesis Mechanism Ass'y 582Z (Australia)	1
	JA03828A	Synthesis Mechanism Ass'y 582Z (Others)	1
04	0H03689B	Acrylic Cassette Compartment Cover	1
05	0J03972B	Bottom Cover	1
06	0J03825A	Leg S	4
07	0M04101B	Caution Label	2
L01	0E00858A	BT Screw M4x6 Philips Binding Head (Black Chromate)	4
L02	0E00736A	Washer 4mm (Black Chromate)	4
L03	0E00857A	BT Screw M3x6 Philips Binding Head	13
L04	0E00852A	BT Screw M4x12 Philips Binding Head	4

8.2. Synthesis Mechanism Ass'y 582Z (A01)

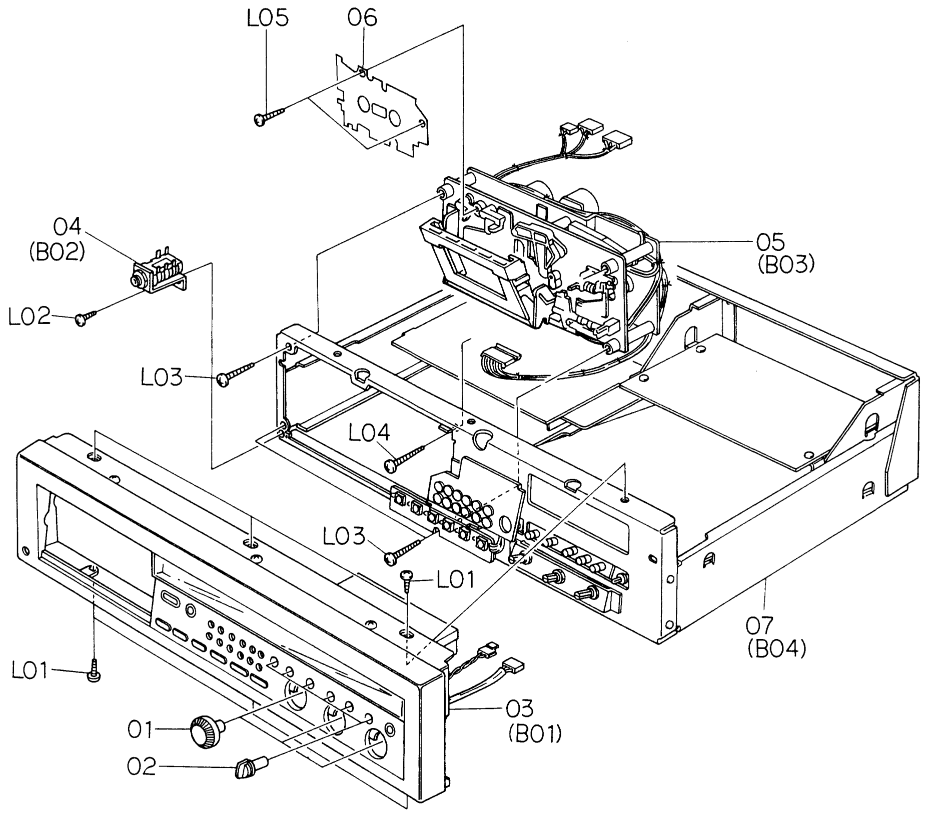

Fig. 8.2.1 Serial No.: A12102102 –

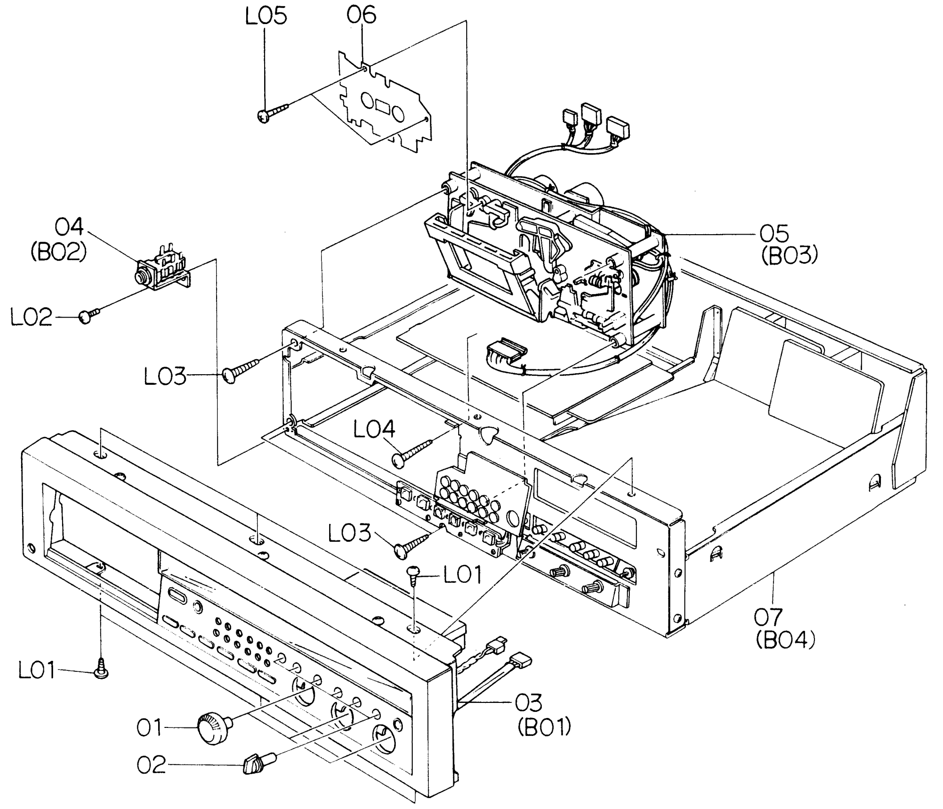

Fig. 8.2.2 Serial Nos.: A12101001 – A12102101

Schematic Ref. No.	Part No.	Description	Q'ty
A01	**JA03826B**	**Synthesis Mechanism Ass'y 582Z (U.S.A. & Canada)**	**1**
	JA03827B	**Synthesis Mechanism Ass'y 582Z (Japan)**	**1**
	JA03830B	**Synthesis Mechanism Ass'y 582Z (220V Class 2)**	**1**
	JA03825B	**Synthesis Mechanism Ass'y 582Z (UK)**	**1**
	JA03829B	**Synthesis Mechanism Ass'y 582Z (Australia)**	**1**
	JA03828B	**Synthesis Mechanism Ass'y 582Z (Others)**	**1**
		Serial No.: A12102903 –	
01	0H03706A	Volume Knob	3
02	0H03712C	Switch Knob	6
03	HA04119A	Front Panel Ass'y 582Z	1
04	JA03390A	Headphone Jack Ass'y	1
05	CA08316A	Mechanism Ass'y 582Z	1
06	CA08259A	Cover Plate Ass'y	1
07	JA03814C	Chassis Ass'y 582Z (U.S.A. & Canada)	1
	JA03815C	Chassis Ass'y 582Z (Japan)	1
	JA03818C	Chassis Ass'y 582Z (220V Class 2)	1
	JA03813C	Chassis Ass'y 582Z (UK)	1
	JA03817C	Chassis Ass'y 582Z (Australia)	1
	JA03816C	Chassis Ass'y 582Z (Others)	1
L01	0E00877A	ST Screw M3x5 Philips Binding Head	6
L02	0E00857A	BT Screw M3x6 Philips Binding Head	1
L03	0E00944A	BT Screw M4x15 Philips Binding Head (Black Chromate)	3
L04	0E00924A	BT Screw M4x16 Philips Binding Head	1
L05	0E00832A	BT Screw M3x14 Philips Binding Head (Black Chromate)	2
A01	**JA03826A**	**Synthesis Mechanism Ass'y 582Z (U.S.A. & Canada)**	**1**
	JA03827A	**Synthesis Mechanism Ass'y 582Z (Japan)**	**1**
	JA03830A	**Synthesis Mechanism Ass'y 582Z (220V Class 2)**	**1**
	JA03825A	**Synthesis Mechanism Ass'y 582Z (UK)**	**1**
	JA03829A	**Synthesis Mechanism Ass'y 582Z (Australia)**	**1**
	JA03828A	**Synthesis Mechanism Ass'y 582Z (Others)**	**1**
		Serial Nos.: A12101001 – A12102902	
01	0H03706A	Volume Knob	3
02	0H03712C	Switch Knob	6
03	HA04119A	Front Panel Ass'y 582Z	1
04	JA03390A	Headphone Jack Ass'y	1
05	CA08273A	Mechanism Ass'y 582Z	1
06	CA08259A	Cover Plate Ass'y	1
07	JA03814B	Chassis Ass'y 582Z (U.S.A. & Canada)	1
	JA03815B	Chassis Ass'y 582Z (Japan)	1
	JA03818B	Chassis Ass'y 582Z (220V Class 2)	1
	JA03813B	Chassis Ass'y 582Z (UK)	1
	JA03817B	Chassis Ass'y 582Z (Australia)	1
	JA03816B	Chassis Ass'y 582Z (Others)	1
L01	0E00877A	ST Screw M3x5 Philips Binding Head	6
L02	0E00857A	BT Screw M3x6 Philips Binding Head	1
L03	0E00867A	BT Screw M4x15 Philips Binding Head	3
L04	0E00878A	BT Screw M4x20 Philips Binding Head	1
L05	0E00832A	BT Screw M3x14 Philips Binding Head	2

8.3. Front Panel Ass'y 582Z (B01)

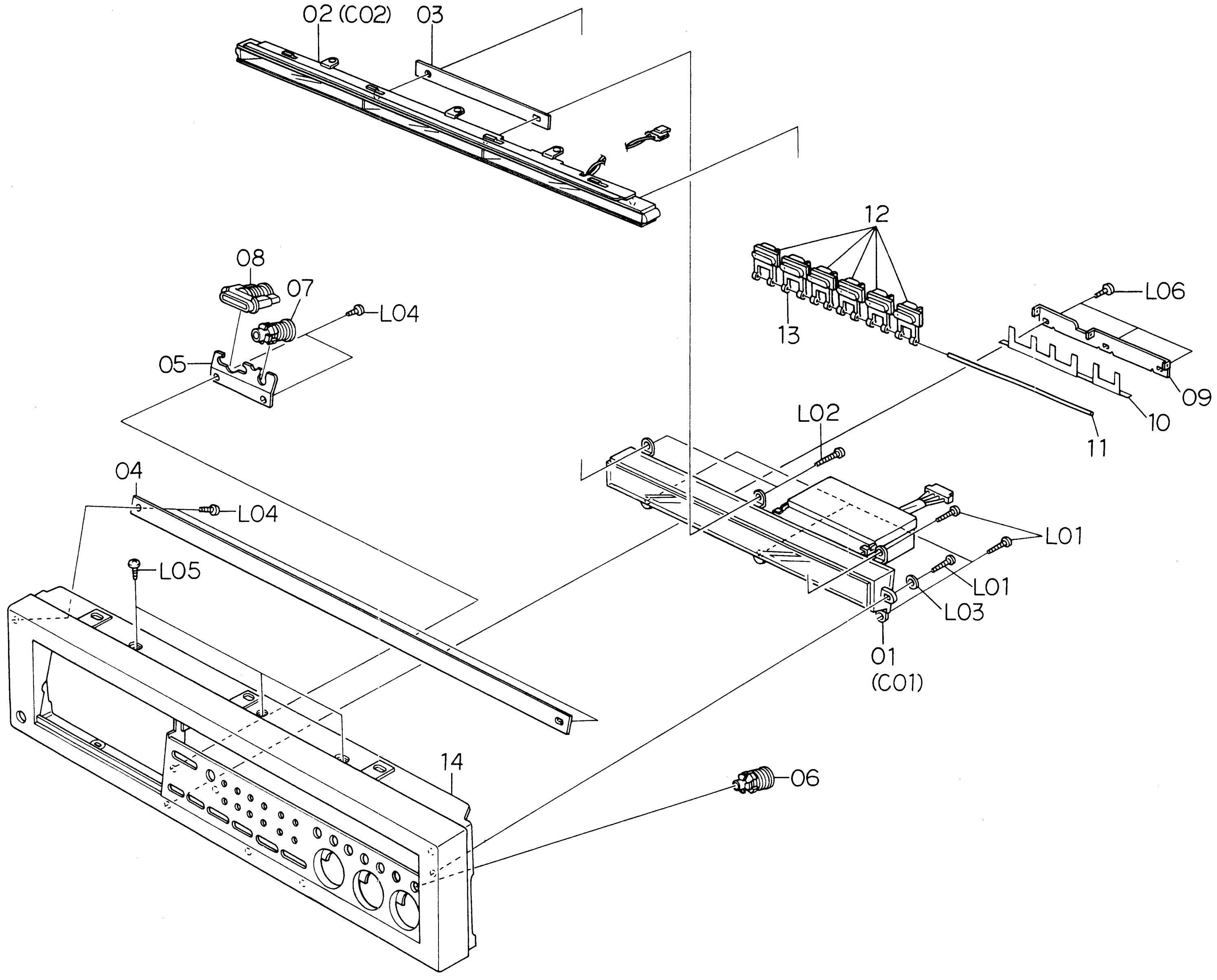

Fig. 8.3

8.4. Headphone Jack Ass'y (B02)

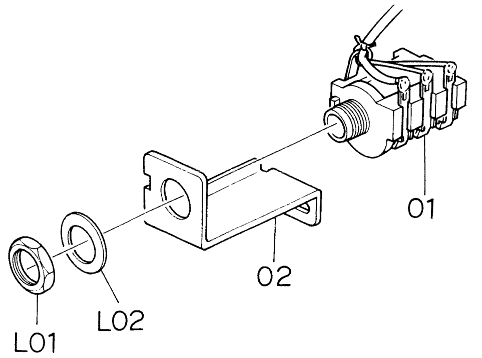

Fig. 8.4

Schematic Ref. No.	Part No.	Description	Q'ty
B01	**HA04119A**	**Front Panel Ass'y 582Z** Serial No.: A12101001 –	**1**
01	HA04120A	LED Indicator Ass'y	1
02	HA03777A	Lamp House Cover Ass'y	1
03	0B08778A	Lamp P.C.B. Cover	1
04	0H03697A	Aluminum Mirror	1
05	0J03979B	Flange Holder	1
06	HA03803A	Push Button Ass'y A	1
07	HA03805A	Push Button Ass'y C	1
08	HA03806A	Counter Reset Button Ass'y	1
09	0J03965C	Control Button Shaft Holder	1
10	0J03986B	Control Button Spring	1
11	0J03966A	Control Button Shaft	1
12	HA03811A	Control Button B Ass'y	5
13	HA03810A	Control Button A Ass'y	1
14	HA04136A	Front Panel Sub Ass'y	1
L01	0E00793A	BT Screw M2x6 Philips Pan Head	5
L02	0E00840A	BT Screw M2x8 Philips Pan Head	1
L03	0E00100A	Washer 2mm	1
L04	0E00873A	BT Screw M2.6x5 Philips Binding Head	3
L05	0E00841A	BT Screw M2x4 Philips Pan Head	3
L06	0E00794A	BT Screw M2x5 Philips Pan Head	3
B02	**JA03390A**	**Headphone Jack Ass'y** Serial No.: A12101001 –	**1**
01	0B08511A	Headphone Jack	1
02	0J03975A	Jack Holder	1
L01	–	Jack Nut	(1)
L02	–	Jack Washer	(1)

8.5. Mechanism Ass'y 582Z (B03)

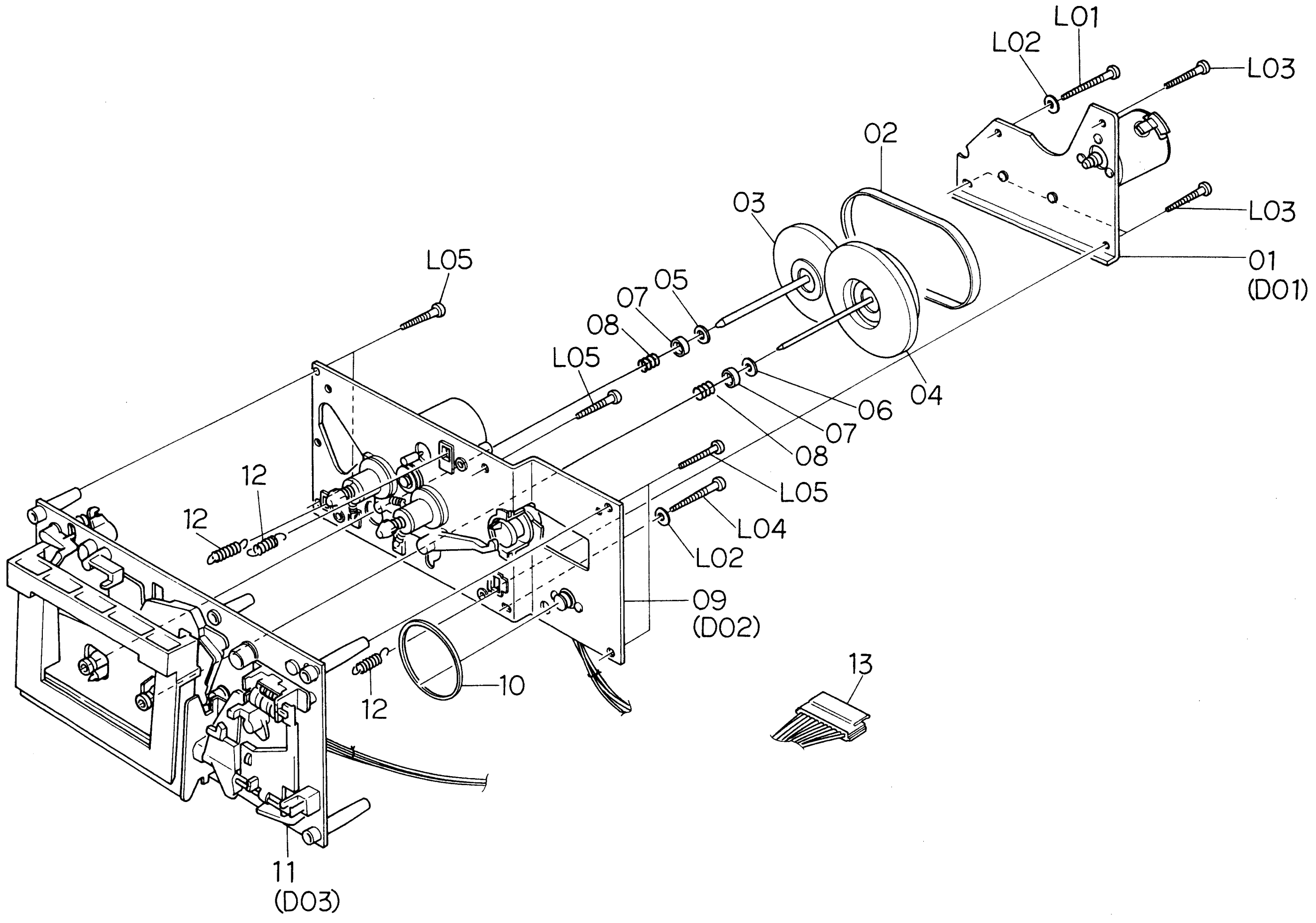

Fig. 8.5

Schematic Ref. No.	Part No.	Description	Q'ty
B03	**CA08316A**	**Mechanism Ass'y 582Z** Serial No.: A12102903 –	**1**
01	CA08017B	Flywheel Holder Ass'y	1
02	0C08096C	Capstan Belt	1
03	CA08173A	Supply Flywheel Ass'y	1
04	CA08015A	Take-up Flywheel Ass'y	1
05	0C08021B	Thrust Washer 3.1mm	1
06	0C08020B	Thrust Washer 2.6mm	1
07	0C08243A	Flange Thrust Cap	2
08	0C08244A	Flange Thrust Spring	2
09	CA08318A	Sub Mechanism Chassis Ass'y	1
10	0C08099B	Control Motor Belt	1
11	CA08275A	Main Mechanism Chassis Ass'y	1
12	0C08175A	Head Base L Spring	3
13	0B08578D	15P-H Connector	1
–	0B08515A	Insu-Lock	8
L01	0E00834A	BT Screw M3x30 Philips Pan Head	1
L02	0E00178A	Washer 3mm	2
L03	0E00833A	BT Screw M3x20 Philips Pan Head	3
L04	0E00835A	BT Screw M3x25 Philips Pan Head	1
L05	0E00883A	BT Screw M3x18 Philips Pan Head	5
B03	**CA08273A**	**Mechanism Ass'y 582Z** Serial No.: A12101001 – A12102902	**1**
01	CA08017B	Flywheel Holder Ass'y	1
02	0C08096C	Capstan Belt	1
03	CA08173A	Supply Flywheel Ass'y	1
04	CA08015A	Take-up Flywheel Ass'y	1
05	0C08021B	Thrust Washer 3.1mm	1
06	0C08020B	Thrust Washer 2.6mm	1
07	0C08243A	Flange Thrust Cap	2
08	0C08244A	Flange Thrust Spring	2
09	CA08201A	Sub Mechanism Chassis Ass'y	1
10	0C08099B	Control Motor Belt	1
11	CA08275A	Main Mechanism Chassis Ass'y	1
12	0C08175A	Head Base L Spring	3
13	0B08578D	15P-H Connector	1
–	0B08515A	Insu-Lock	8
L01	0E00834A	BT Screw M3x30 Philips Pan Head	1
L02	0E00178A	Washer 3mm	2
L03	0E00833A	BT Screw M3x20 Philips Pan Head	3
L04	0E00835A	BT Screw M3x25 Philips Pan Head	1
L05	0E00883A	BT Screw M3x18 Philips Pan Head	5

8.6. Chassis Ass'y 582Z (B04)

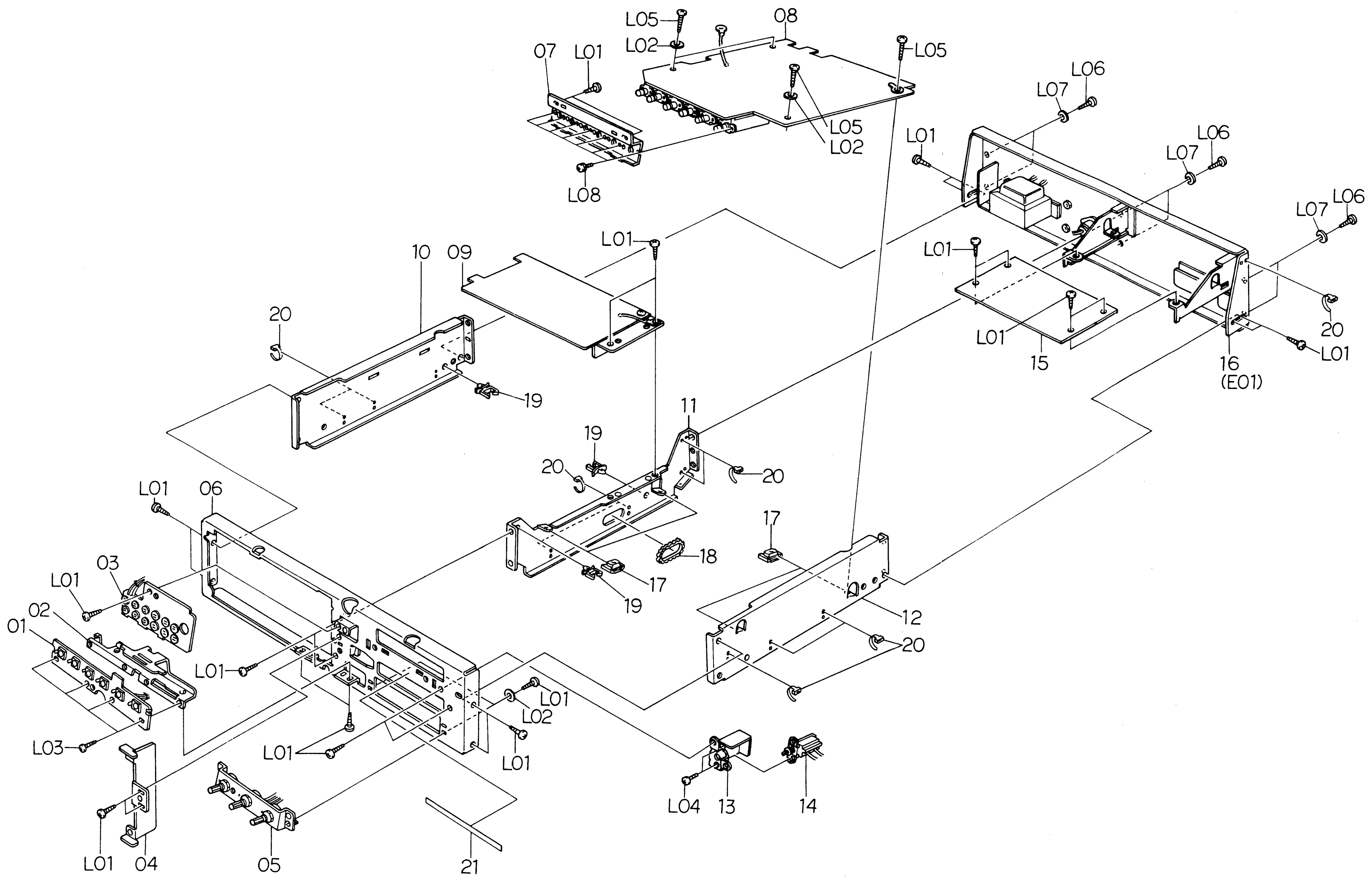

Fig. 8.6.1 Serial No.: A12102102 –

Schematic Ref. No.	Part No.	Description	Q'ty
B04	**JA03814C**	**Chassis Ass'y 582Z (U.S.A. & Canada)**	**1**
	JA03815C	**Chassis Ass'y 582Z (Japan)**	**1**
	JA03818C	**Chassis Ass'y 582Z (220V Class 2)**	**1**
	JA03813C	**Chassis Ass'y 582Z (UK)**	**1**
	JA03817C	**Chassis Ass'y 582Z (Australia)**	**1**
	JA03816C	**Chassis Ass'y 582Z (Others)**	**1**
		Serial No.: A12102903 –	
01	BA03976A	Control Switch P.C.B. Ass'y	1
02	0J03976B	Control Switch Holder	1
03	BA04401A	Record Cal. P.C.B. Ass'y	1
04	0J04135C	Mechanism Bracket	1
05	BA04400A	Volume P.C.B. Ass'y	1
06	0J04305A	Front Chassis	1
07	0J04009D	Switch Holder	1
08	BA04520A	Main P.C.B. Ass'y	1
09	BA04509A	Logic P.C.B. Ass'y (U.S.A., Canada, Japan & Others)	1
	BA04514A	Logic P.C.B. Ass'y (220V Class 2, UK & Australia)	1
10	0J03969C	Side Chassis L	1
11	0J03970D	Center Chassis	1
12	0J03968D	Side Chassis R	1
13	0J04014A	Power Switch Holder	1
14	0B07253A	Power Switch (U.S.A., Canada & Others)	1
	0B07252A	Power Switch (220V Class 2, UK & Australia)	1
	0B07271A	Power Switch (Japan)	1
15	BA04518A	Dolby NR P.C.B. Ass'y	1
16	HA04205A	Rear Panel Ass'y (U.S.A. & Canada)	1
	HA04206A	Rear Panel Ass'y (Japan)	1
	HA04209A	Rear Panel Ass'y (220V Class 2)	1
	HA04204A	Rear Panel Ass'y (UK)	1
	HA04208A	Rear Panel Ass'y (Australia)	1
	HA04207A	Rear Panel Ass'y (Others)	1
17	0J04013C	P.C.B. Spacer	4
18	0B08590A	Free Bushing 80mm	1
19	0B08580A	Wire Holder 161	3
20	0B08515A	Insu-Lock	23
21	0M04052B	Switch Label	1
L01	0E00857A	BT Screw M3x6 Philips Binding Head	27
L02	0E00637A	Washer 3.3mm	6
L03	0E00859A	BT Screw M2.6x6 Philips Binding Head	4
L04	0E00502A	Screw M3x5 Philips Pan Head	2
L05	0E00865A	BT Screw M3x10 Philips Binding Head	4
L06	0E00860A	BT Screw M3x6 Philips Binding Head (Black Chromate)	6
L07	0E00157A	Washer 3mm (Black Plastics)	6
L08	0E00622A	Screw M3x5 Philips Pan Head (2A)	7

Schematic Ref. No.	Part No.	Description	Q'ty
B04	**JA03814B**	**Chassis Ass'y 582Z (U.S.A. & Canada)**	**1**
	JA03815B	**Chassis Ass'y 582Z (Japan)**	**1**
	JA03818B	**Chassis Ass'y 582Z (220V Class 2)**	**1**
	JA03813B	**Chassis Ass'y 582Z (UK)**	**1**
	JA03817B	**Chassis Ass'y 582Z (Australia)**	**1**
	JA03816B	**Chassis Ass'y 582Z (Others)**	**1**
		Serial Nos.: A12102102 – A12102902	
01	BA03976A	Control Switch P.C.B. Ass'y	1
02	0J03976B	Control Switch Holder	1
03	BA04401A	Record Cal. P.C.B. Ass'y	1
04	0J04135C	Mechanism Bracket	1
05	BA04400A	Volume P.C.B. Ass'y	1
06	0J04305A	Front Chassis	1
07	0J04009D	Switch Holder	1
08	BA04520A	Main P.C.B. Ass'y	1
09	BA04434A	Logic P.C.B. Ass'y (U.S.A., Canada, Japan & Others)	1
	BA04435A	Logic P.C.B. Ass'y (220V Class 2, UK & Australia)	1
10	0J03969C	Side Chassis L	1
11	0J03970D	Center Chassis	1
12	0J03968D	Side Chassis R	1
13	0J04014A	Power Switch Holder	1
14	0B07253A	Power Switch (U.S.A., Canada & Others)	1
	0B07252A	Power Switch (220V Class 2, UK & Australia)	1
	0B07271A	Power Switch (Japan)	1
15	BA04518A	Dolby NR P.C.B. Ass'y	1
16	HA04205A	Rear Panel Ass'y (U.S.A. & Canada)	1
	HA04206A	Rear Panel Ass'y (Japan)	1
	HA04209A	Rear Panel Ass'y (220V Class 2)	1
	HA04204A	Rear Panel Ass'y (UK)	1
	HA04208A	Rear Panel Ass'y (Australia)	1
	HA04207A	Rear Panel Ass'y (Others)	1
17	0J04013C	P.C.B. Spacer	4
18	0B08590A	Free Bushing 80mm	1
19	0B08580A	Wire Holder 161	3
20	0B08515A	Insu-Lock	23
21	0M04052B	Switch Label	1
L01	0E00857A	BT Screw M3x6 Philips Binding Head	27
L02	0E00637A	Washer 3.3mm	6
L03	0E00859A	BT Screw M2.6x6 Philips Binding Head	4
L04	0E00502A	Screw M3x5 Philips Pan Head	2
L05	0E00865A	BT Screw M3x10 Philips Binding Head	4
L06	0E00860A	BT Screw M3x6 Philips Binding Head (Black Chromate)	6
L07	0E00157A	Washer 3mm (Black Plastics)	6
L08	0E00622A	Screw M3x5 Philips Pan Head (2A)	7

Schematic Ref. No.	Part No.	Description	Q'ty
B04	**JA03814A**	**Chassis Ass'y 582Z (U.S.A. & Canada)**	**1**
	JA03815A	**Chassis Ass'y 582Z (Japan)**	**1**
	JA03818A	**Chassis Ass'y 582Z (220V Class 2)**	**1**
	JA03813A	**Chassis Ass'y 582Z (UK)**	**1**
	JA03817A	**Chassis Ass'y 582Z (Australia)**	**1**
	JA03816A	**Chassis Ass'y 582Z (Others)**	**1**
		Serial Nos.: A12101001 – A12102101	
01	BA03976A	Control Switch P.C.B. Ass'y	1
02	0J03976B	Control Switch Holder	1
03	BA04401A	Record Cal. P.C.B. Ass'y	1
04	0J04135C	Mechanism Bracket	1
05	BA04400A	Volume P.C.B. Ass'y	1
06	0J04305A	Front Chassis	1
07	0J04009D	Switch Holder	1
08	BA04367A	Main P.C.B. Ass'y	1
09	BA04434A	Logic P.C.B. Ass'y (U.S.A., Canada, Japan & Others)	1
	BA04435A	Logic P.C.B. Ass'y (220V Class 2, UK & Australia)	1
10	0J03969C	Side Chassis L	1
11	0J03970D	Center Chassis	1
12	0J03968D	Side Chassis R	1
13	0J04014A	Power Switch Holder	1
14	0B07253A	Power Switch (U.S.A., Canada & Others)	1
	0B07252A	Power Switch (220V Class 2, UK & Australia)	1
	0B07271A	Power Switch (Japan)	1
15	BA04403A	Playback Dolby NR P.C.B. Ass'y	1
16	BA04404A	Record Dolby NR P.C.B. Ass'y	1
17	HA04130A	Rear Panel Ass'y (U.S.A. & Canada)	1
	HA04131A	Rear Panel Ass'y (Japan)	1
	HA04134A	Rear Panel Ass'y (220V Class 2)	1
	HA04129A	Rear Panel Ass'y (UK)	1
	HA04133A	Rear Panel Ass'y (Australia)	1
	HA04132A	Rear Panel Ass'y (Others)	1
18	0J04013C	P.C.B. Spacer	4
19	0B08590A	Free Bushing 80mm	1
20	0B08580A	Wire Holder 161	3
21	0B08515A	Insu-Lock	23
22	0M04052B	Switch Label	1
L01	0E00857A	BT Screw M3x6 Philips Binding Head	27
L02	0E00637A	Washer 3.3mm	6
L03	0E00859A	BT Screw M2.6x6 Philips Binding Head	4
L04	0E00502A	Screw M3x5 Philips Pan Head	2
L05	0E00865A	BT Screw M3x10 Philips Binding Head	4
L06	0E00860A	BT Screw M3x6 Philips Binding Head (Black Chromate)	6
L07	0E00157A	Washer 3mm (Black Plastics)	6
L08	0E00622A	Screw M3x5 Philips Pan Head (2A)	7

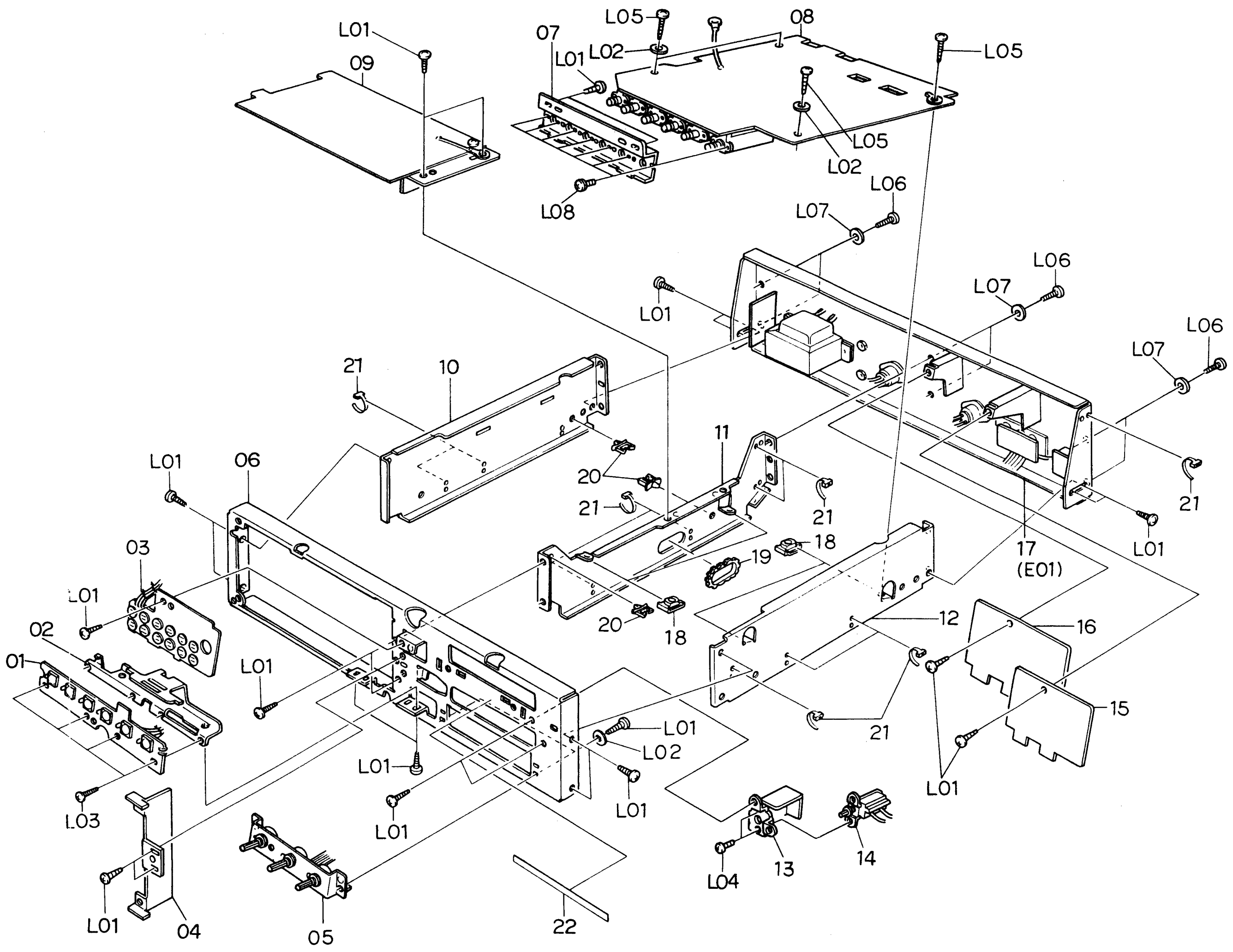

Fig. 8.6.2 Serial Nos.: A12101001 – A12102101

8.7. LED Indicator Ass'y (C01)

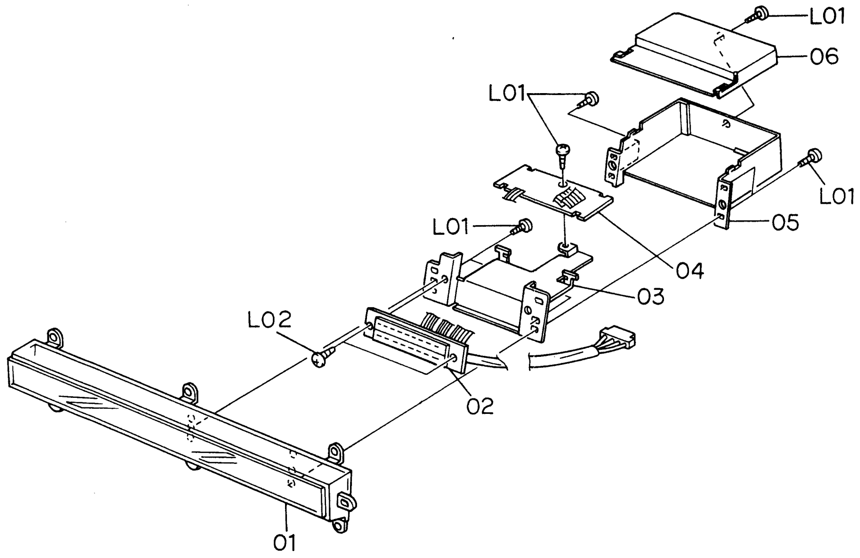

Fig. 8.7

8.8. Lamp House Cover Ass'y (C02)

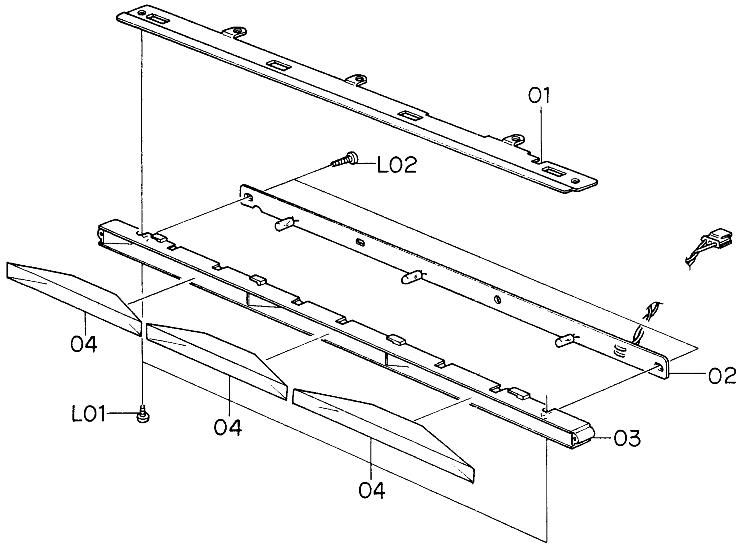

Fig. 8.8

8.9. Flywheel Holder Ass'y (D01)

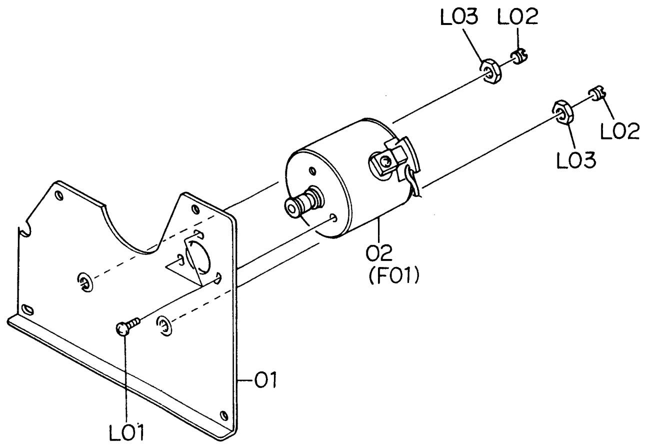

Fig. 8.9

Schematic Ref. No.	Part No.	Description	Q'ty
C01	**HA04120A**	**LED Indicator Ass'y** Serial No.: A12101001 –	**1**
01	HA04122A	LED Indicator Base Ass'y	1
02	0H03988A	Indicator Filter	1
03	0J04304A	LED Indicator Hold Plate	1
04	BA04312A	Indicator P.C.B. Ass'y	1
05	0J04302A	Shield Case	1
06	0J04303A	Shield Cover	1
L01	0E00841A	BT Screw M2x4 Philips Pan Head	7
L02	0E00854A	BT Screw M2.6x4 Philips Pan Head (Chromate)	2
C02	**HA03777A**	**Lamp House Cover Ass'y** Serial No.: A12101001 –	**1**
01	0J03977B	Lamp House Cover Holder	1
02	BA03974A	Lamp P.C.B. Ass'y	1
03	0H03673A	Lamp House Cover	1
04	0H03674D	Lamp House	3
L01	0E00853A	BT Screw M2x3 Philips Pan Head	2
L02	0E00793A	BT Screw M2x6 Philips Binding Head	2
D01	**CA08017B**	**Flywheel Holder Ass'y** Serial No.: A12101001 –	**1**
01	0C08013I	Flywheel Holder	1
02	CA08106B	Capstan Motor Ass'y	1
L01	0E00226A	Screw M2.6x4 Philips Pan Head	3
L02	0C08068C	Thrust Screw	2
L03	0C03857A	Lock Nut	2
D02	**CA08318A**	**Sub Mechanism Chassis Ass'y** Serial No.: A12102903 –	**1**
01	0C08039B	Reel Hub Head	2
02	CA08038B	Reel Hub B Ass'y	2
03	CA08037A	Reel Hub Take-up Ass'y	1
04	CA08064A	Reel Hub Supply Ass'y	1
05	CA08039A	Back Tension Ass'y	1
06	0C08269A	Back Tension Spring	1
07	CA08193A	Idler Ass'y	1
08	CA08042A	Brake Arm Ass'y	2
09	0C08030C	Brake Drive Arm	1
10	0C08129A	Brake Arm Spring	1
11	0C08128A	Brake Drive Arm Spring	1
12	CA08242A	Reel Motor Ass'y	1
13	CA08034A	Control Motor Ass'y	1
14	0C08053B	Volume Coupler	1
15	0B07240A	Volume Control 10K (B)	1
16	CA08194A	Sub Chassis Ass'y	1
L01	0E00698A	E-Ring 2.5mm	1
L02	0E00837A	Stopper Ring 3mm	2
L03	0E00838A	Stopper Ring 4mm	1
L04	0E00859A	BT Screw M2.6x6 Philips Binding Head	1
L05	0E00226A	Screw M2.6x4 Philips Pan Head	5
L06	–	Volume Nut	(1)
L07	–	Volume Washer	(1)
D02	**CA08201A**	**Sub Mechanism Chassis Ass'y** Serial Nos.: A12101001 – A12102902	**1**
01	0C08039B	Reel Hub Head	2
02	CA08038B	Reel Hub B Ass'y	2
03	CA08037A	Reel Hub Take-up Ass'y	1
04	CA08064A	Reel Hub Supply Ass'y	1
05	CA08039A	Back Tension Ass'y	1
06	0C08269A	Back Tension Spring	1
07	CA08193A	Idler Ass'y	1
08	CA08042A	Brake Arm Ass'y	2
09	0C08030C	Brake Drive Arm	1
10	0C08129A	Brake Arm Spring	1
11	0C08128A	Brake Drive Arm Spring	1
12	0B09091A	Ceramic Capacitor 0.01μ 50V	2
13	CA08117B	Reel Motor Ass'y	1
14	CA08034A	Control Motor Ass'y	1
15	0C08053B	Volume Coupler	1
16	0B07240A	Volume Control 10K (B)	1
17	CA08194A	Sub Chassis Ass'y	1
L01	0E00698A	E-Ring 2.5mm	1
L02	0E00837A	Stopper Ring 3mm	2
L03	0E00838A	Stopper Ring 4mm	1
L04	0E00859A	BT Screw M2.6x6 Philips Binding Head	1
L05	0E00226A	Screw M2.6x4 Philips Pan Head	5
L06	0E00843A	BT Screw M2.6x4 Philips Pan Head	1
L07	0E00037A	Earth Lug B-5	1
L08	–	Volume Nut	(1)
L09	–	Volume Washer	(1)

8.10. Sub Mechanism Chassis Ass'y (D02)

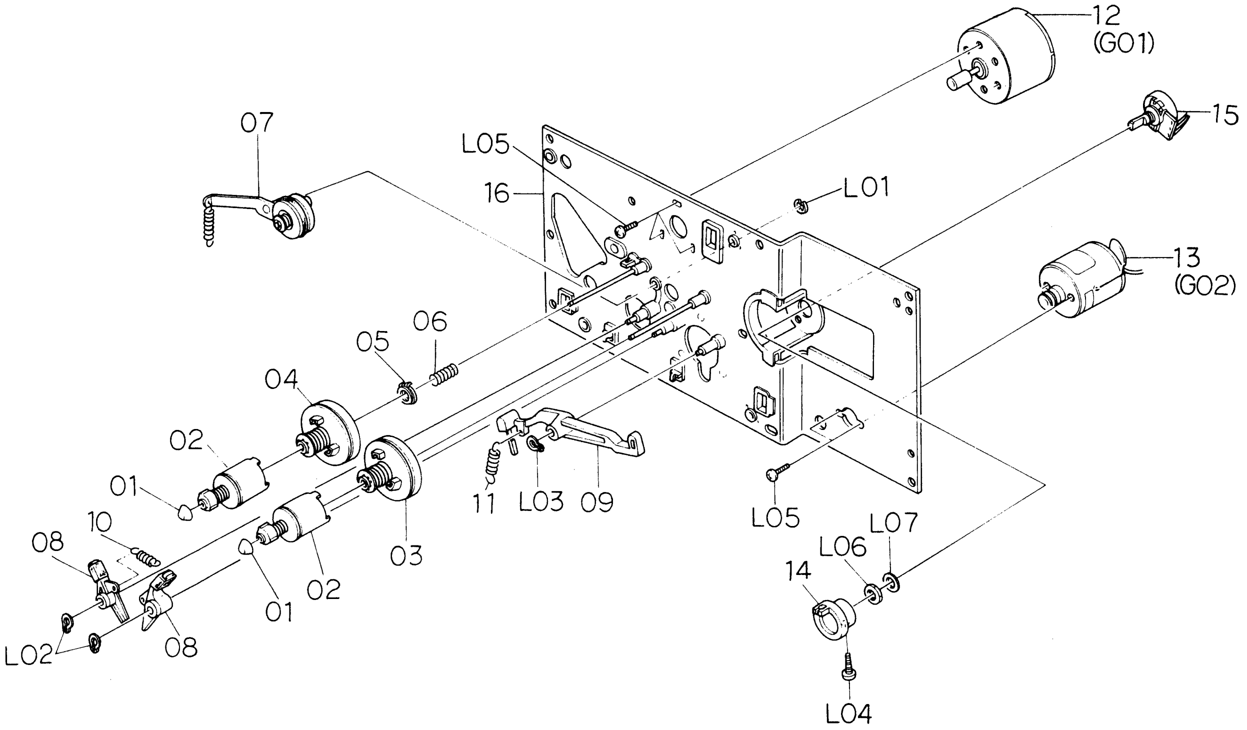
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Fig. 8.10.1 Serial No.: A12102903 –

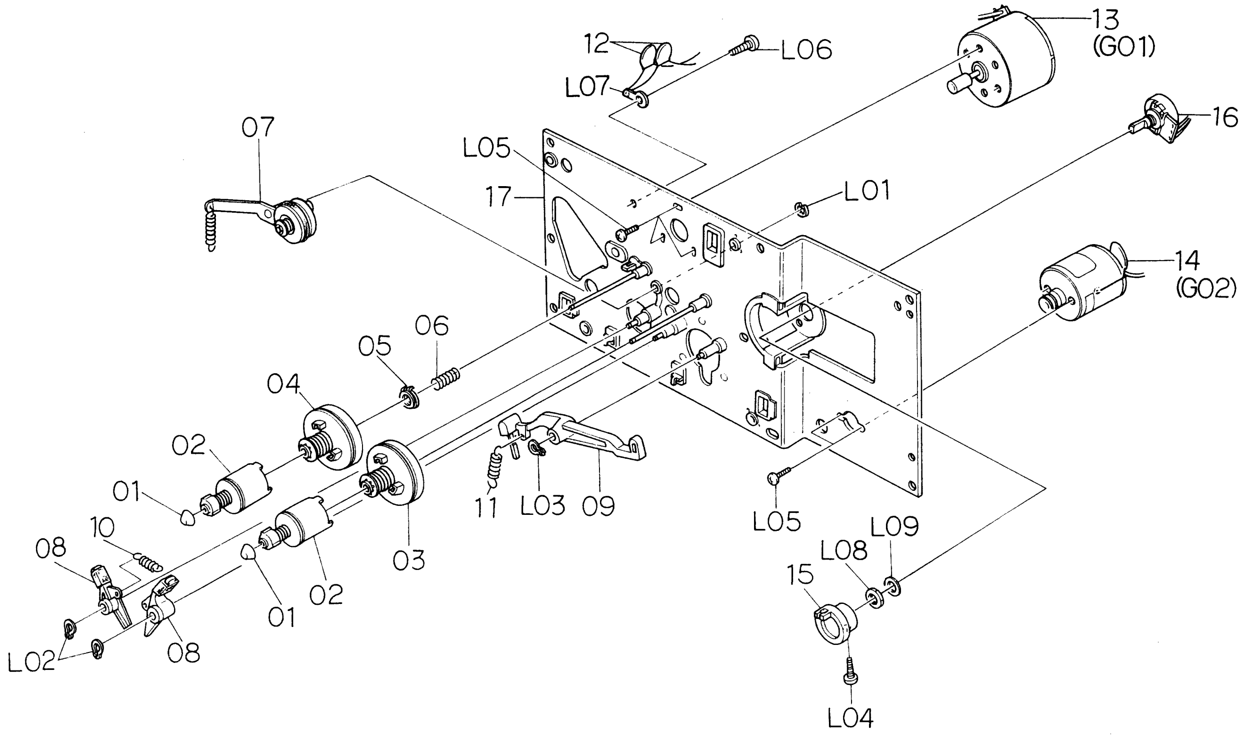
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Fig. 8.10.2 Serial Nos.: A12101001 – A12102902

Schematic Ref. No.	Part No.	Description	Q'ty
D03	**CA08275A**	**Main Mechanism Chassis Ass'y** Serial No.: A12101001 –	**1**
01	CA08048A	Cassette Case Holder L Ass'y	1
02	CA08022A	Cassette Case Holder R Ass'y	1
03	CA08055A	Cassette Case Ass'y	1
04	CA08298A	Head Mount Base Ass'y	1
05	0C08121A	Supply Pressure Roller Spring	1
06	0C08250A	Supply Pressure Roller Spring B	1
07	CA08053B	Supply Pressure Roller Ass'y	1
08	CA08122B	Supply Pressure Roller Thrust Spring	1
09	CA08079B	Take-up Pressure Roller Ass'y	1
10	0C08183B	Take-up Pressure Roller Thrust Spring	1
11	0C08182A	Pressure Roller Drive Bar B	1
12	CA08297A	Head Base Ass'y B	1
13	0C08086B	Head Base Roller	3
14	0C08050B	Record Sensor	1
15	0C08051E	Cassette Hold Arm	1
16	0C08120A	Cassette Hold Arm Spring	1
17	CA08196A	Back Tension Ass'y	1
18	0C08254A	Back Tension Arm Collar	1
19	CA08027A	Head Base Drive Arm Ass'y	1
20	0C08143C	Head Base Drive Arm Spring	1
21	CA08026A	Pressure Roller Drive Arm Ass'y	1
22	0C08071C	Counter Reset Arm	1
23	0C08124B	Eject Linkage Wire	1
24	0C08057E	Eject Arm	1
25	0C08078B	Arm Shaft	1
26	CA08237A	Auto Shut-off Ass'y	1
27	0C08097C	Counter Belt A	1
28	CA08020A	Counter Ass'y	1
29	0C08098B	Counter Belt B	1
30	0C08067C	Eject Stopper	1
31	0C08134C	Eject Stopper Spring	1
32	0C08119A	Record Protector	1
33	0C08194C	Damper Lock Arm	1
34	0C08153A	Damper Arm Spring Tube	1
35	0C08125A	Damper Arm Spring	1
36	0C08151A	Lid Arm Spring Tube	1
37	0C08114A	Lid Arm Spring	1
38	CA08030A	Pneumatic Damper Ass'y	1
39	CA08023A	Supply Capstan Flange Ass'y	1
40	CA08024A	Take-up Capstan Flange Ass'y	1
41	0C08186A	Cam Drive Gear	1
42	0C08029H	Control Cam	1
43	0C08117A	Counter-Load Arm Spring	1
44	0C08152A	Counter-Load Arm Spring Tube	1
45	CA08028A	Counter-Load Arm Ass'y	1
46	CA08183A	Main Chassis Ass'y	1
L01	0E00837A	Stopper Ring 3mm	13
L02	0E00834A	BT Screw M3x30 Philips Pan Head	2
L03	0E00831A	BT Screw M3x10 Philips Pan Head	4
L04	0E00254A	Washer 3.1mm (Plastics)	2
L05	0E00222A	E-Ring 2mm	2
L06	0E00839A	Stopper Ring 2.5mm	1
L07	0E00876A	BT Screw M2.6x8 Philips Pan Head	11
L08	0C08060B	Height Adjustment Nut	2
L09	0E00142A	Washer 2.6mm	2
L10	0E00879A	BT Screw M2x15 Philips Pan Head	1
L11	0E00838A	Stopper Ring 4mm	3
L12	0E00846A	BT Screw M3x8 Philips Pan Head	3
L13	0E00895A	Earth Lug 3mm	2
L14	0E00859A	BT Screw M2.6x6 Philips Binding Head	1
L15	0C08255A	Washer 2.6mm	1

8.11. Main Mechanism Chassis Ass'y (D03)

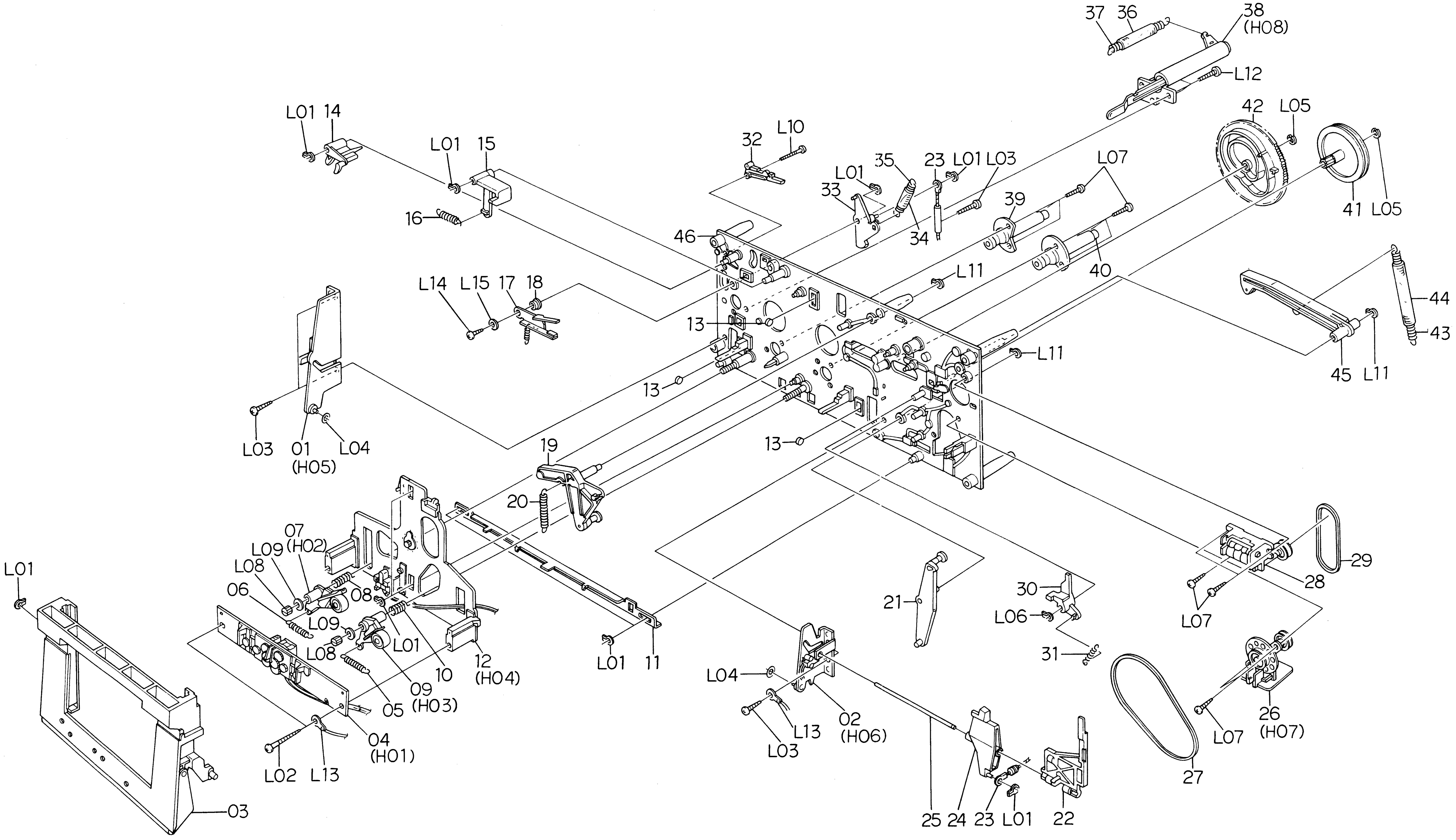
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Fig. 8.11

8.12. Rear Panel Ass'y (E01)

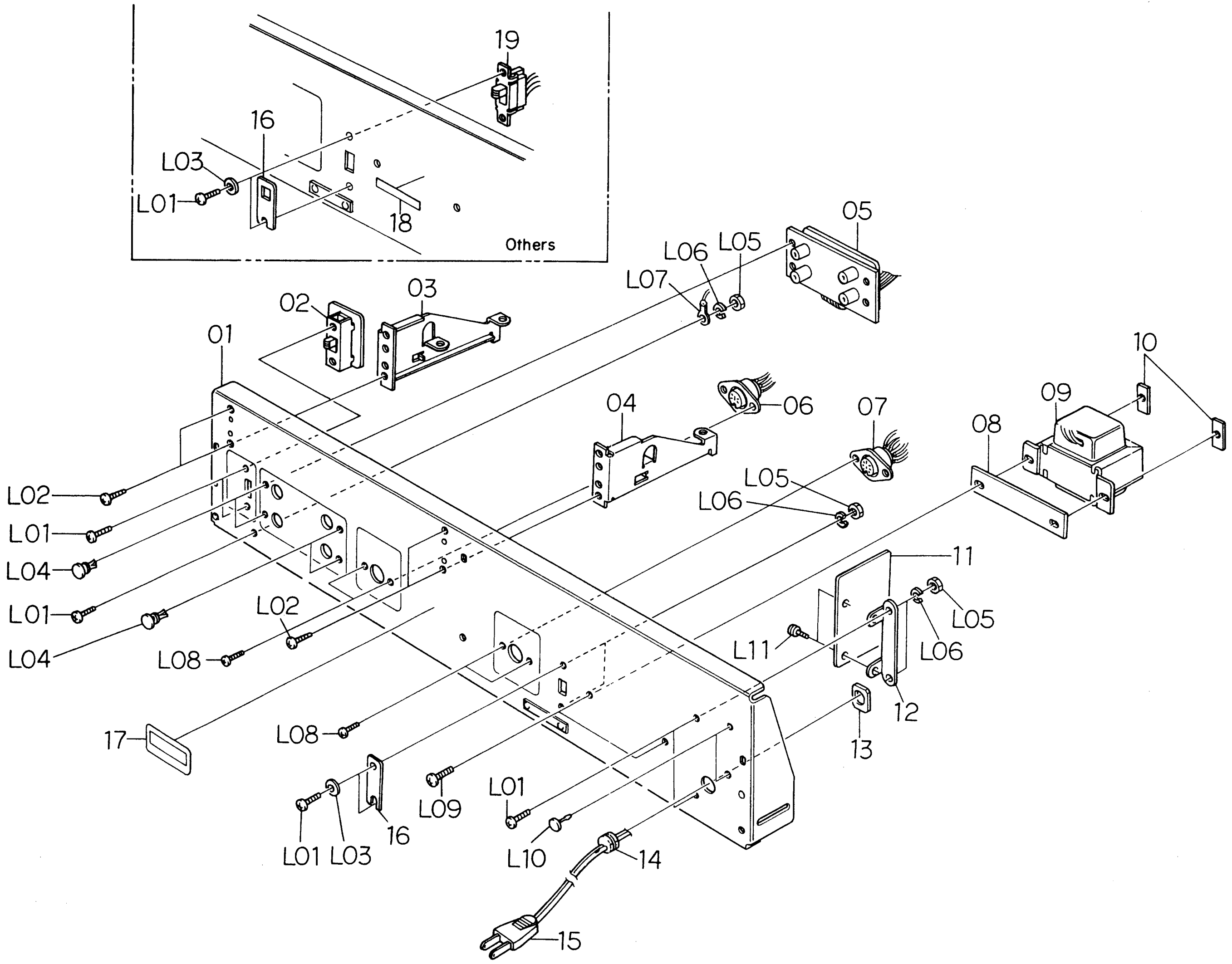


Fig. 8.12.1 Serial No.: A12102102 –

Schematic Ref. No.	Part No.	Description	Q'ty
E01	**HA04205A**	**Rear Panel Ass'y (U.S.A. & Canada)**	1
	HA04206A	**Rear Panel Ass'y (Japan)**	1
	HA04209A	**Rear Panel Ass'y (220V Class 2)**	1
	HA04204A	**Rear Panel Ass'y (UK)**	1
	HA04208A	**Rear Panel Ass'y (Australia)**	1
	HA04207A	**Rear Panel Ass'y (Others)**	1
		Serial No.: A12102102 –	
01	0H03994A	Rear Panel	1
02	BA04402A	MPX Filter Switch P.C.B. Ass'y	1
03	0J04431B	Dolby NR P.C.B. Holder D	1
04	0J04432B	Dolby NR P.C.B. Holder E	1
05	BA04370A	Pin Jack P.C.B. Ass'y	1
06	0B08355A	4P DIN Socket	1
07	0B08584A	8P DIN Socket	1
08	0J04016A	Transformer Plate	1
09	0B06648B	Power Transformer (U.S.A. & Canada)	1
	0B06649A	Power Transformer (Japan)	1
	0B06651A	Power Transformer (220V Class 2, UK & Australia)	1
	0B06650A	Power Transformer (Others)	1
10	0C01162B	Bolt Receptacle Plate	2
11	0B07874A	Mains P.C.B.	1
12	0J03893A	Terminal P.C.B. Holder B	1
13	0A03154B	Cord Spacer	1
14	0B08037U	Cord Bushing C (U.S.A., Canada, Japan, 220V Class 2, Australia & Others)	1
	0B08351A	Cord Bushing 4K-4 (UK)	1
15	0B08533A	Power Cord (U.S.A., Canada & Others)	1
	0B08219B	Power Cord (Japan)	1
	0B08093U	Power Cord (220V Class 2)	1
	0B08348A	Power Cord (UK)	1
	0B05241A	Power Cord (Australia)	1
16	0J03663C	Switch Cover (U.S.A., Canada, Japan, 220V Class 2, UK & Australia)	1
	0M03946A	Voltage Selector Lock Plate C (Others)	1
17	0M03458B	Pass Label	1
18	0M03796A	Voltage Label 220V (220V Class 2)	1
	0M03797A	Voltage Label 240V (UK & Australia)	1
	0M04293A	Voltage Label 120V/220-240V (Others)	1
19	0B07092U	Voltage Selector (Others)	1
–	0B08342A	Spark Killer (U.S.A. & Canada)	1
	0B08363A	Spark Killer (Japan)	1
	0B08445A	Spark Killer (220V Class 2)	2
	0B08240U	Spark Killer (UK, Australia & Others)	1
–	0B08344A	Fuse T200mA (220V Class 2, UK & Australia)	1
*–	0B08349A	Fuse Clip (220V Class 2, UK & Australia)	2
–	0M04172A	Fuse Label T200mA (220V Class 2, UK & Australia)	1
–	0M03905A	UL Label AUDIO (U.S.A. & Canada)	1
–	0M04218A	Serial Number Plate	1
–	0M04270A	Rating Label (Japan)	1
–	0M04185A	FSZ Mark Label (220V Class 2)	1
–	0M04263A	EP Label (220V Class 2)	1
–	0M03844B	BS Code Label (UK)	1
–	0F01071A	Free-up Belt (220V Class 2, UK & Australia)	1
L01	0E00594A	Screw M3x8 Philips Binding Head (Bronze)	5
L02	0E00825A	BT Screw M2.6x8 Philips Binding Head (Black Chromate)	4
L03	0E00945A	Screw M2.6x4 Philips Binding Head (Black Chromate)	2
L04	0B08720A	Plastic Rivet	4
*L05	0E00507A	Nut Hex. M3	5
*L06	0E00581A	Washer 3mm Spring	5
L07	0E00037A	Earth Lug B-5	1
L08	0E00714A	Screw M2.6x6 Philips Binding Head (Bronze)	4
L09	0E00756A	Screw M4x8 Philips Binding Head (Bronze)	2
L10	0B08583A	Plastic Clip	2
L11	0E00622A	Screw M3x5 Philips Pan Head (2A)	2
–	0J03644A	Chovert Rivet	2
		*: Depends on the Versions.	

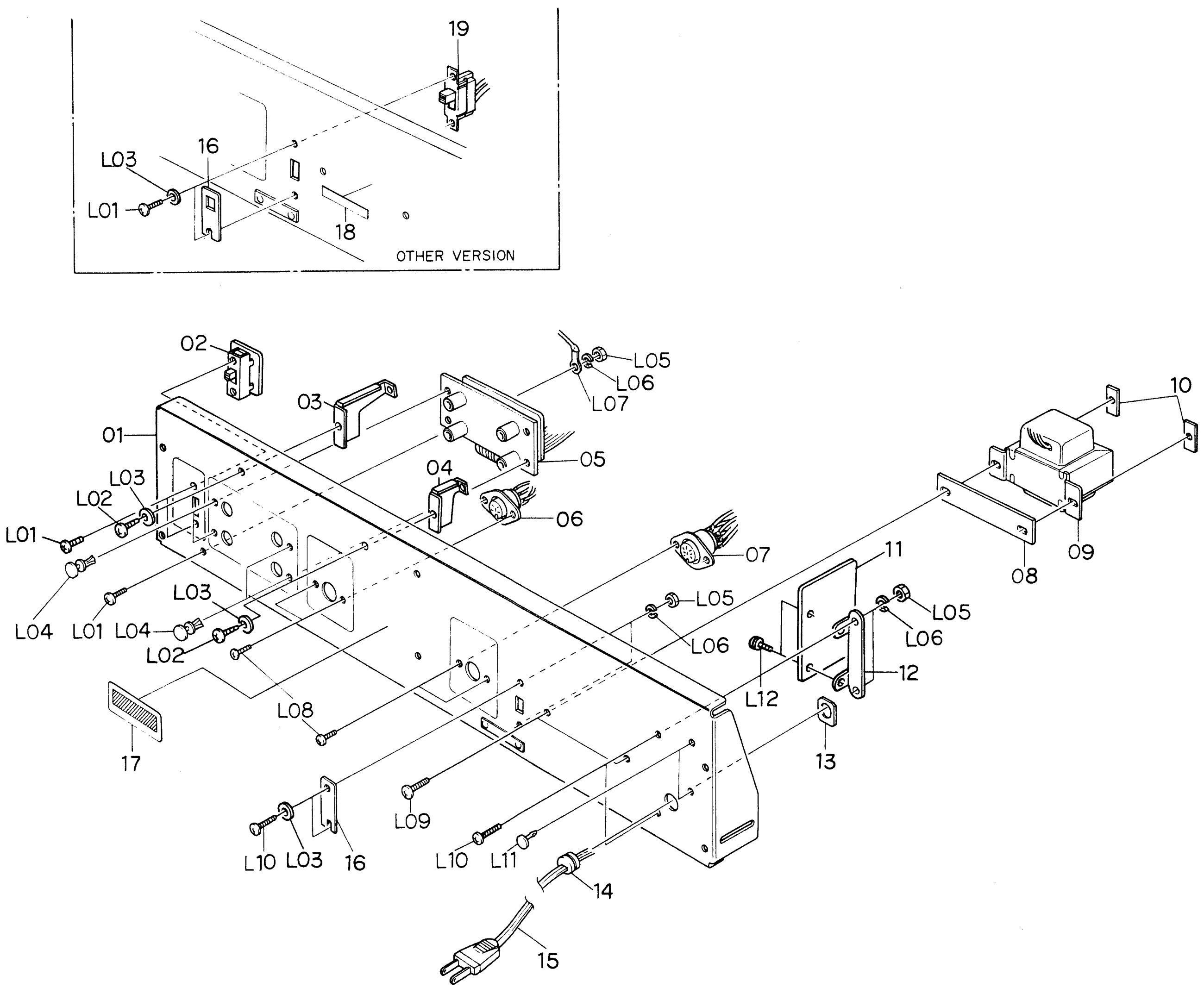


Fig. 8.12.2 Serial Nos.: A12101001 – A12102101

Schematic Ref. No.	Part No.	Description	Q'ty
E01	**HA04130A**	**Rear Panel Ass'y (U.S.A. & Canada)**	1
	HA04131A	**Rear Panel Ass'y (Japan)**	1
	HA04134A	**Rear Panel Ass'y (220V Class 2)**	1
	HA04129A	**Rear Panel Ass'y (UK)**	1
	HA04133A	**Rear Panel Ass'y (Australia)**	1
	HA04132A	**Rear Panel Ass'y (Others)**	1
		Serial Nos.: A12101001 – A12102101	
01	0H03994A	Rear Panel	1
02	BA04402A	MPX Filter Switch P.C.B. Ass'y	1
03	0J04347A	Dolby NR P.C.B. Holder D	1
04	0J04348A	Dolby NR P.C.B. Holder E	1
05	BA04370A	Pin Jack P.C.B. Ass'y	1
06	0B08355A	4P DIN Socket	1
07	0B08584A	8P DIN Socket	1
08	0J04016A	Transformer Plate	1
09	0B06648B	Power Transformer (U.S.A. & Canada)	1
	0B06610A	Power Transformer (Japan)	1
	0B06612A	Power Transformer (220V Class 2, UK & Australia)	1
	0B06611B	Power Transformer (Others)	1
10	0C01162B	Bolt Receptacle Plate	2
11	0B07874A	Mains P.C.B.	1
12	0J03893A	Terminal P.C.B. Holder B	1
13	0A03154B	Cord Spacer	1
14	0B08037U	Cord Bushing C (U.S.A., Canada, Japan, 220V Class 2, Australia & Others)	1
	0B08351A	Cord Bushing 4K-4 (UK)	1
15	0B08533A	Power Cord (U.S.A., Canada & Others)	1
	0B08219B	Power Cord (Japan)	1
	0B08093U	Power Cord (220V Class 2)	1
	0B08348A	Power Cord (UK)	1
	0B08666A	Power Cord (Australia)	1
16	0J03663C	Switch Cover (U.S.A., Canada, Japan, 220V Class 2, UK & Australia)	1
	0M03946A	Voltage Selector Lock Plate C (Others)	1
17	0M03458B	Pass Label	1
18	0M03796A	Voltage Label 220V (220V Class 2)	1
	0M03797A	Voltage Label 240V (UK & Australia)	1
	0M03955A	Voltage Label 120V/220-240V (Others)	1
19	0B07092U	Voltage Selector (Others)	1
–	0B08342A	Spark Killer (U.S.A. & Canada)	1
	0B08363A	Spark Killer (Japan)	1
	0B08445A	Spark Killer (220V Class 2)	2
	0B08240U	Spark Killer (UK, Australia & Others)	1
–	0B08344A	Fuse T200mA (220V Class 2, UK & Australia)	1
*–	0B08349A	Fuse Clip (220V Class 2, UK & Australia)	2
–	0M04172A	Fuse Label T200mA (220V Class 2, UK & Australia)	1
–	0M03905A	UL Label AUDIO (U.S.A. & Canada)	1
–	0M04218A	Serial Number Plate	1
–	0M04270A	Rating Label (Japan)	1
–	0M04185A	FSZ Mark Label (220V Class 2)	1
–	0M04263A	EP Label (220V Class 2)	1
–	0M03844B	BS Code Label (UK)	1
–	0F01071A	Free-up Belt (220V Class 2, UK & Australia)	1
L01	0E00593A	Screw M3x6 Philips Binding Head (Bronze)	3
L02	0E00825A	BT Screw M2.6x8 Philips Binding Head (Black Chromate)	4
L03	0E00945A	Screw M2.6x4 Philips Binding Head (Black Chromate)	2
L04	0B08720A	Plastic Rivet	4
*L05	0E00507A	Nut Hex. M3	5
L06	0E00037A	Earth Lug B-5	1
*L07	0E00581A	Washer 3mm Spring	5
L08	0E00714A	Screw M2.6x6 Philips Binding Head (Bronze)	4
L09	0E00756A	Screw M4x8 Philips Binding Head (Bronze)	2
L10	0E00701A	Screw M3x10 Philips Binding Head (Bronze)	2
L11	0B08583A	Plastic Clip	2
L12	0E00622A	Screw M3x5 Philips Pan Head (2A)	2
–	0J03644A	Chovert Rivet	2
		*: Depends on the Versions.	

8.13. Capstan Motor Ass'y (F01)

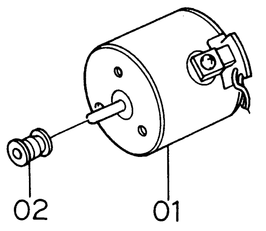


Fig. 8.13

8.14. Reel Motor Ass'y (G01)

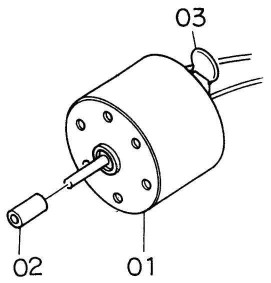


Fig. 8.14.1
Serial No.: A12102903 –

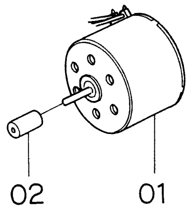


Fig. 8.14.2
Serial Nos.: A12101001 –
A12102902

8.15. Control Motor Ass'y (G02)

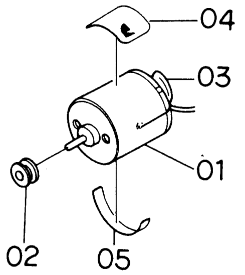

04
03
01
02
05

Fig. 8.15

8.16. Head Mount Base Ass'y (H01)

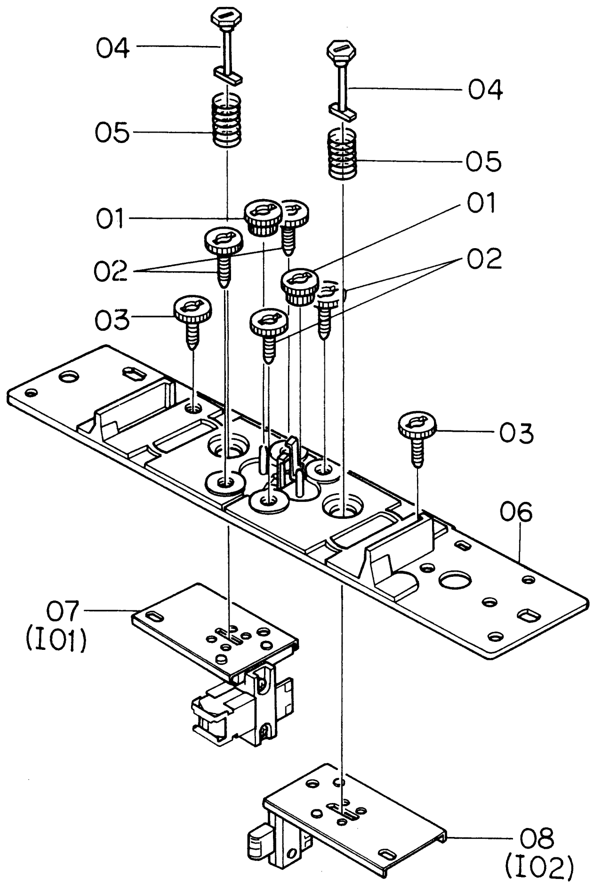

04
05
01
02
03
04
05
01
02
03
06
07
(I01)
08
(I02)

Fig. 8.16

8.17. Supply Pressure Roller Ass'y (H02)

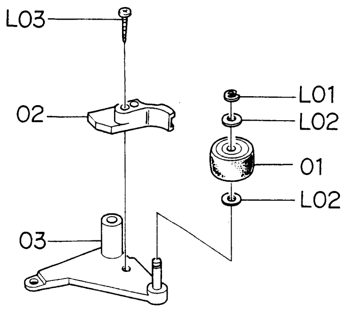

L03
02
03
L01
L02
01
L02

Fig. 8.17

8.18. Take-up Pressure Roller Ass'y (H03)

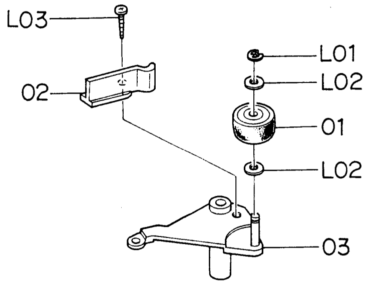

L03
02
L01
L02
01
L02
03

Fig. 8.18

8.19. Head Base Ass'y B (H04)

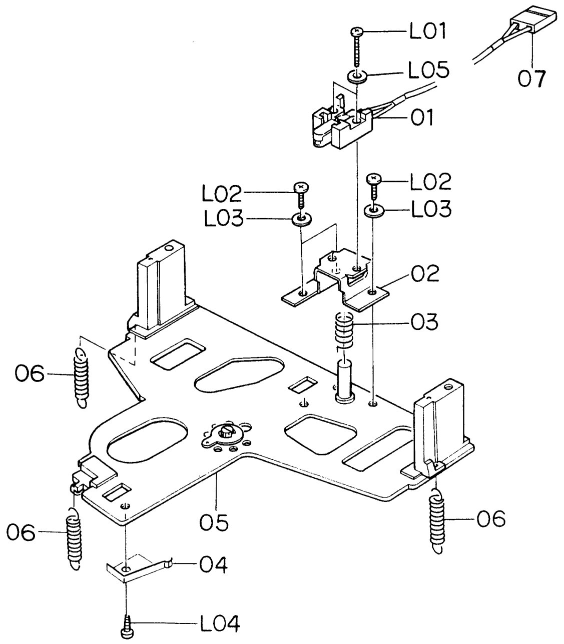

L01
L05
07
01
L02
L03
L02
L03
02
03
06
06
05
06
04
L04

Fig. 8.19

8.20. Cassette Case Holder L Ass'y (H05)

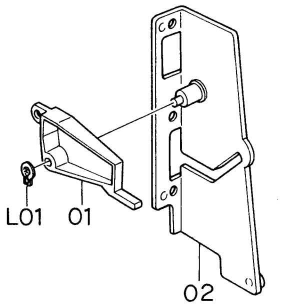


Fig. 8.20

8.21. Cassette Case Holder R Ass'y (H06)

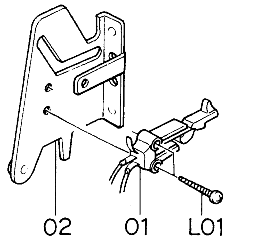


Fig. 8.21

8.22. Auto Shut-off Ass'y (H07)

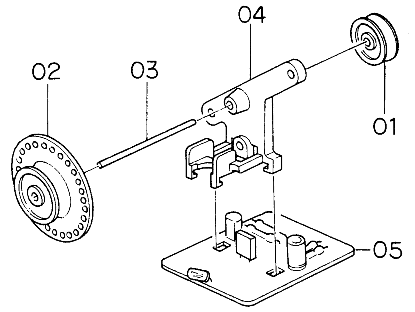

04
02
03
01
05

Fig. 8.22

8.23. Pneumatic Damper Ass'y (H08)

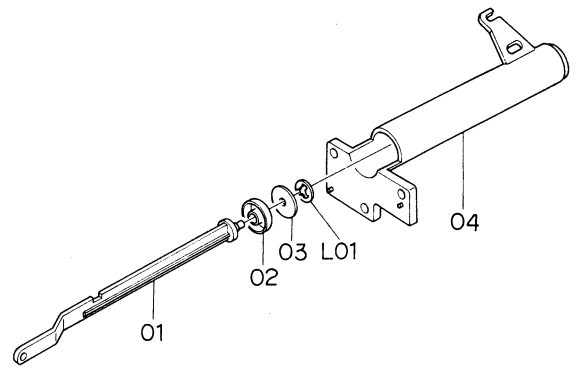

01
02
03
L01
04

Fig. 8.23

Schematic Ref. No.	Part No.	Description	Q'ty
F01	**CA08106B**	**Capstan Motor Ass'y** Serial No.: A12101001 –	**1**
01	0C08135A	Capstan Motor	1
02	0C08079G	Capstan Motor Pulley	1
G01	**CA08242A**	**Reel Motor Ass'y** Serial No.: A12102903 –	**1**
01	0C08272A	Reel Motor	1
02	0C08063F	Reel Motor Pulley	1
03	0B09290A	Ceramic Capacitor 0.01μ 50V Z	1
G01	**CA08117B**	**Reel Motor Ass'y** Serial Nos.: A12101001 – A12102902	**1**
01	0C08218A	Reel Motor	1
02	0C08063F	Reel Motor Pulley	1
G02	**CA08034A**	**Control Motor Ass'y** Serial No.: A12101001 –	**1**
01	0C08137A	Control Motor	1
02	0C08064A	Control Motor Pulley	1
03	0B09292A	Ceramic Capacitor 0.1μ 50V Z	1
04	0M03985A	Control Motor Label	1
05	0M03988A	Motor Seal B	1
H01	**CA08298A**	**Head Mount Base Ass'y** Serial No.: A12101001 –	**1**
01	0C08028C	Head Height Adjustment Gear	2
02	0C08027F	Head Height Adjustment Screw	4
03	0C08026D	Azimuth Alignment Screw	2
04	0C08161B	Spring Stopper	2
05	0C08187B	Head Plate Spring	2
06	CA08083C	Head Mount Base Sub Ass'y	1
07	CA08295A	P-8L Playback Head Ass'y	1
08	CA08296A	R-8L Record Head Ass'y	1
H02	**CA08053B**	**Supply Pressure Roller Ass'y** Serial No.: A12101001 –	**1**
01	0C08164G	Pressure Roller	1
02	0C08189C	Supply Tape Guide	1
03	CA08061A	Supply Pressure Roller Arm Ass'y	1
L01	0E00042A	E-Ring 1.5mm	1
L02	0C08024A	Washer 2mm	2
L03	0E00788A	BT Screw M2x8 Philips Pan Head	1
H03	**CA08079B**	**Take-up Pressure Roller Ass'y** Serial No.: A12101001 –	**1**
01	0C08164G	Pressure Roller	1
02	0C08181C	Take-up Tape Guide	1
03	CA08073B	Take-up Pressure Roller Arm Ass'y	1
L01	0E00042A	E-Ring 1.5mm	1
L02	0C08024A	Washer 2mm	2
L03	0E00788A	BT Screw M2x8 Philips Pan Head	1
H04	**CA08297A**	**Head Base Ass'y B** Serial No.: A12101001 –	**1**
01	GA02017A	Erase Head E-8L	1
02	0C08158D	EH Hold Plate	1
03	0C08166A	EH Hold Plate Spring	1
04	0C08174D	Cassette Hold Spring	1
05	CA08003Q	Head Base Ass'y	1
06	0B08870A	3P-H Connector	1
L01	0E00951A	Screw M1.7x7 Philips Pan Head (Black Chromate)	2
L02	0E00909A	Screw M2x6 Philips Pan Head (Black Chromate)	3
L03	0E00117A	Washer 2mm	3
L04	0E00853A	BT Screw M2x3 Philips Pan Head	1
L05	0E00952A	Washer 1.7mm	2
H05	**CA08048A**	**Cassette Case Holder L Ass'y** Serial No.: A12101001 –	**1**
01	0C08073C	Lid Arm A	1
02	CA08035A	Cassette Case Holder L Sub Ass'y	1
L01	0E00837A	Stopper Ring 3mm	1
H06	**CA08022A**	**Cassette Case Holder R Ass'y** Serial No.: A12101001 –	**1**
01	0C08133A	Eject Sensor	1
02	CA08044A	Cassette Case Holder R Sub Ass'y	1
L01	0E00840A	BT Screw M2x8 Philips Pan Head	2
H07	**CA08237A**	**Auto Shut-off Ass'y** Serial No.: A12101001 –	**1**
01	0C08206B	Shut-off Pulley B	1
02	0C08047A	Shut-off Pulley A	1
03	0C08088B	Shut-off Pulley Shaft	1
04	0C08207B	Shut-off Pulley Holder	1
05	BA04070A	Shut-off P.C.B. Ass'y	1
H08	**CA08030A**	**Pneumatic Damper Ass'y** Serial No.: A12101001 –	**1**
01	0C08058C	Damper Piston	1
02	0C08102B	Damper Ring	1
03	0C08010C	Damper Plate	1
04	0C08059E	Sylinder	1
L01	0E00874A	Stopper Ring CS 2mm	1

8.24. P-8L Playback Head Ass'y (101)

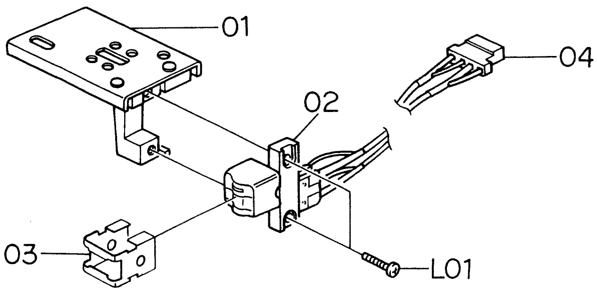


Fig. 8.24

8.25. R-8L Record Head Ass'y (102)

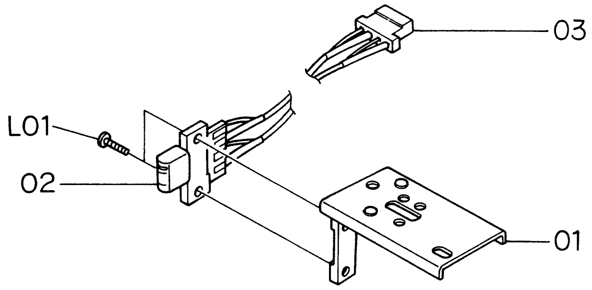


Fig. 8.25

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
101	**CA08295A**	**P-8L Playback Head Ass'y** Serial No.: A12101001 –	**1**	**102**	**CA08296A**	**R-8L Record Head Ass'y** Serial No.: A12101001 –	**1**
01	CA08307A	Head Plate Ass'y	1	01	CA08308B	Head Plate Ass'y	1
02	GA02034A	P-8L Playback Head	1	02	GA01050A	R-8L Record Head	1
03	0C08169D	Pad Lifter 54	1	03	0B08768A	4P-H Connector B	1
04	0B08767A	4P-H Connector	1	L01	0E00887A	Screw M1.7x4 Philips Pan Head	2
L01	0E00886A	Screw M1.7x6.5 Philips Pan Head	2				

9. OVERALL TIMING CHART

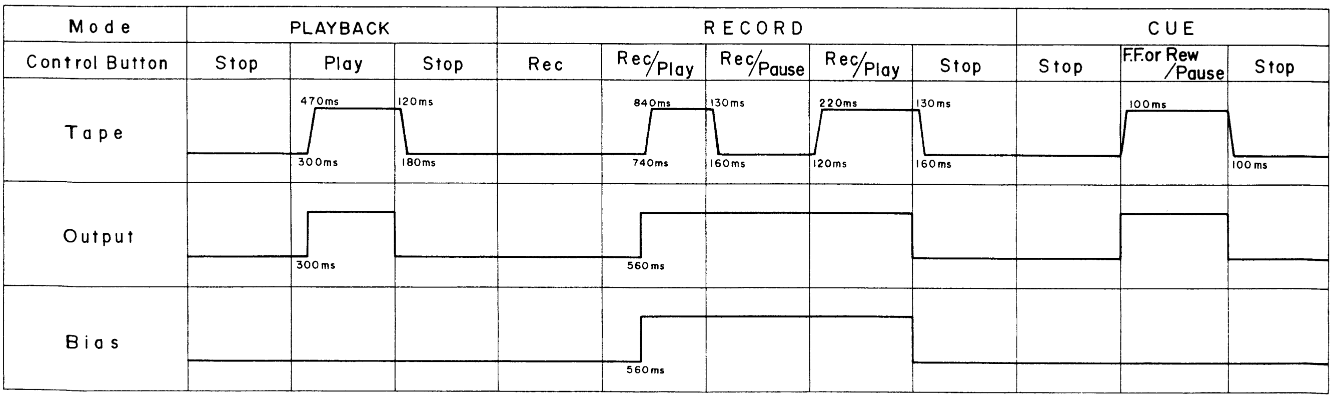


Fig. 9

10. EQ. AMP. FREQUENCY RESPONSE

10.1. Playback Frequency Response

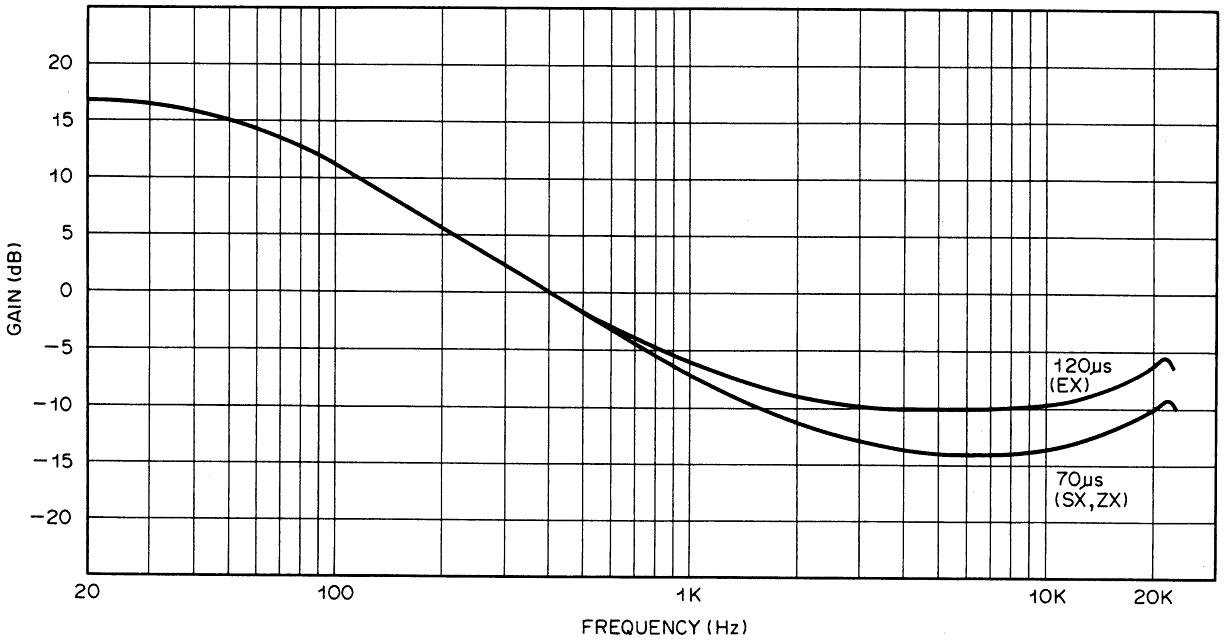


Fig. 10.1

10.2. Record Current Frequency Response

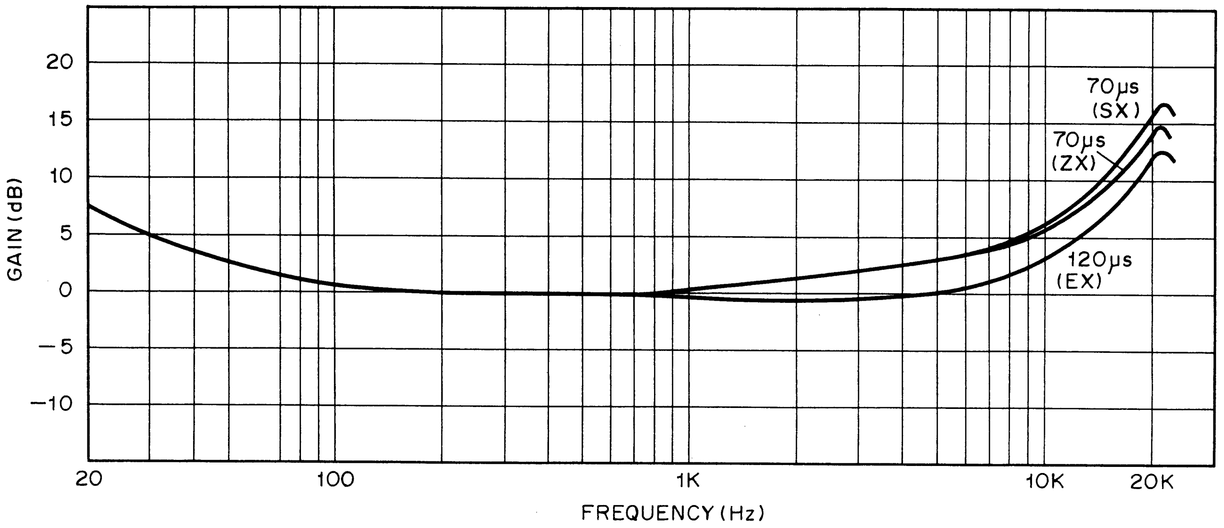


Fig. 10.2

11. WIRING DIAGRAMS

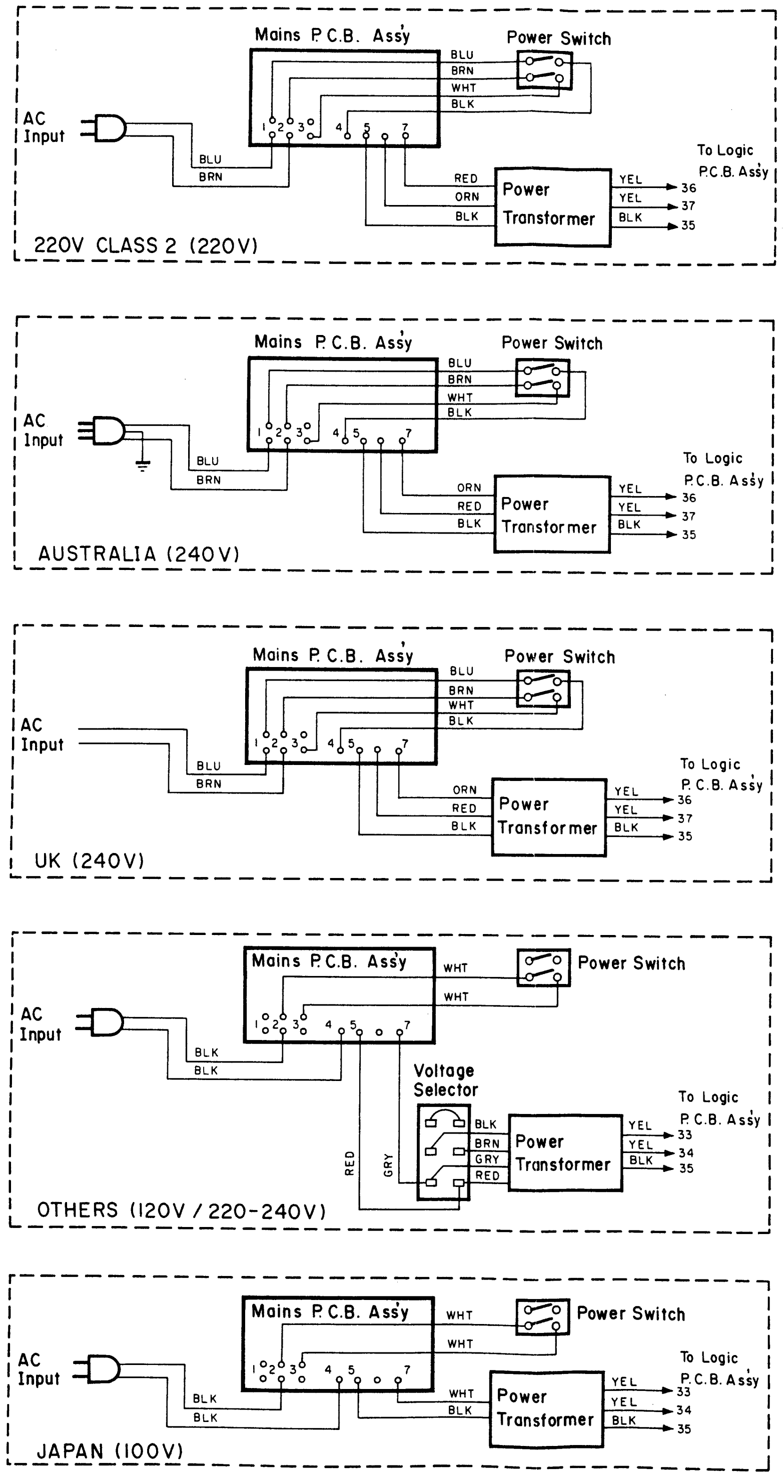

Mains P.C.B. Ass'y
Power Switch
AC Input
BLU
BRN
WHT
BLK
RED
ORN
YEL
GRY
Power Transformer
To Logic P.C.B. Ass'y
36
37
35
33
34
220V CLASS 2 (220V)
AUSTRALIA (240V)
UK (240V)
Voltage Selector
OTHERS (120V / 220-240V)
JAPAN (100V)

Fig. 11.1

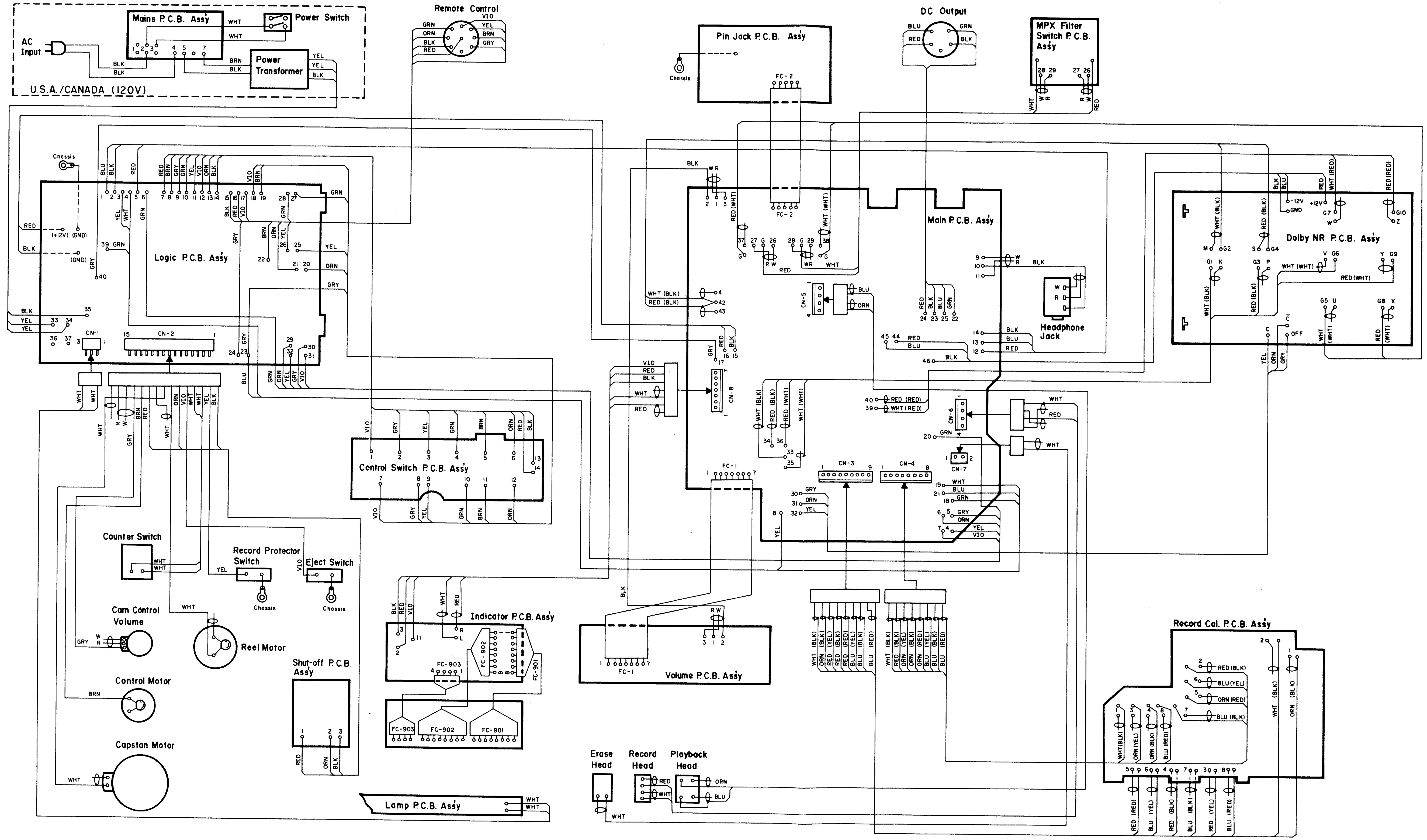

Mains P.C.B. Ass'y
Power Switch
AC Input
Power Transformer
U.S.A./CANADA (120V)
Remote Control
Pin Jack P.C.B. Ass'y
Chassis
DC Output
MPX Filter Switch P.C.B. Ass'y
Logic P.C.B. Ass'y
Main P.C.B. Ass'y
Dolby NR P.C.B. Ass'y
Headphone Jack
Control Switch P.C.B. Ass'y
Counter Switch
Record Protector Switch
Eject Switch
Cam Control Volume
Reel Motor
Control Motor
Capstan Motor
Shut-off P.C.B. Ass'y
Indicator P.C.B. Ass'y
Volume P.C.B. Ass'y
Lamp P.C.B. Ass'y
Erase Head
Record Head
Playback Head
Record Cal. P.C.B. Ass'y
CN-1
CN-2
CN-3
CN-4
CN-5
CN-6
CN-7
CN-8
FC-1
FC-2
FC-901
FC-902
FC-903

Fig. 11.2.1 Serial No.: A12102102 –

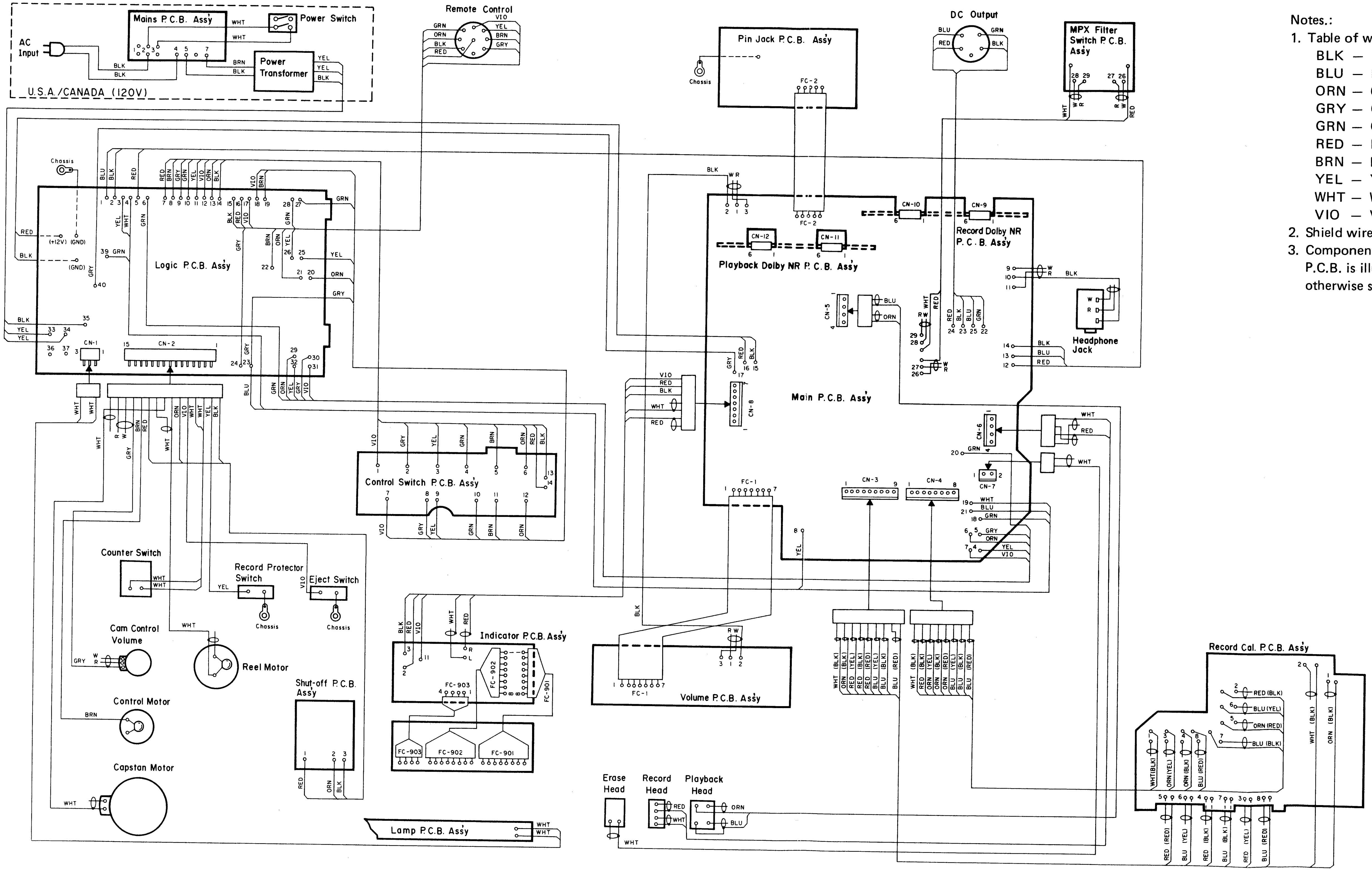

Mains P.C.B. Ass'y
Power Switch
AC Input
Power Transformer
U.S.A./CANADA (120V)
Remote Control
Pin Jack P.C.B. Ass'y
Chassis
DC Output
MPX Filter Switch P.C.B. Ass'y
Logic P.C.B. Ass'y
CN-1
CN-2
Playback Dolby NR P.C.B. Ass'y
Record Dolby NR P.C.B. Ass'y
Headphone Jack
Main P.C.B. Ass'y
Control Switch P.C.B. Ass'y
Counter Switch
Record Protector Switch
Eject Switch
Cam Control Volume
Reel Motor
Control Motor
Capstan Motor
Shut-off P.C.B. Ass'y
Indicator P.C.B. Ass'y
FC-901
FC-902
FC-903
Lamp P.C.B. Ass'y
Volume P.C.B. Ass'y
FC-1
FC-2
CN-3
CN-4
CN-5
CN-6
CN-7
CN-8
CN-9
CN-10
CN-11
CN-12
Erase Head
Record Head
Playback Head
Record Cal. P.C.B. Ass'y

Fig. 11.2.2 Serial Nos.: A12101001 – A12102101

Notes.:

1. Table of wire colors:

BLK	Black
BLU	Blue
ORN	Orange
GRY	Gray
GRN	Green
RED	Red
BRN	Brown
YEL	Yellow
WHT	White
VIO	Violet

2. Shield wire color is shown in ( ).
3. Component side view of the P.C.B. is illustrated unless otherwise specified.

12. BLOCK DIAGRAMS

12.1. Amplifier Section

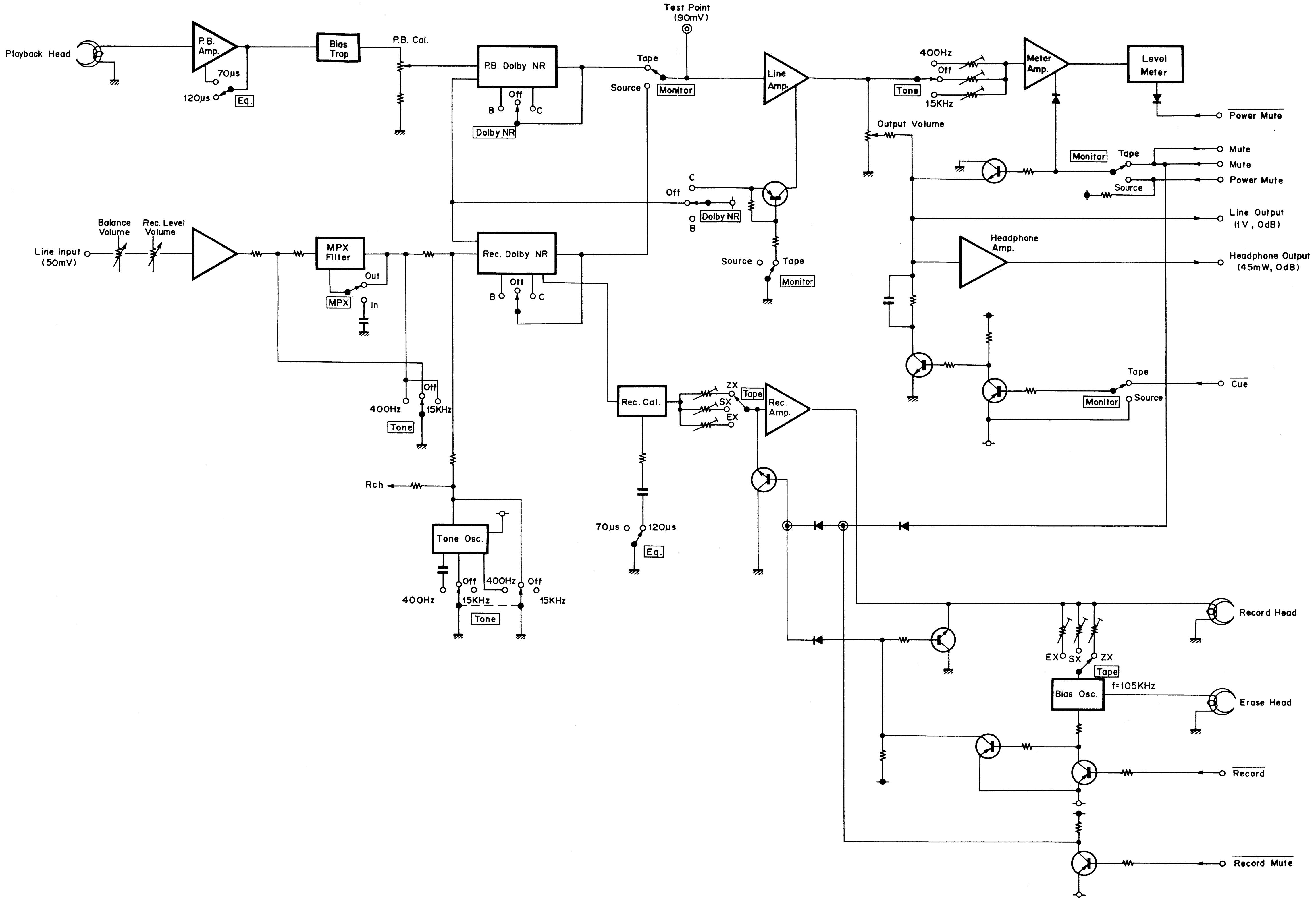

Playback Head
P.B. Amp.
70μs
120μs
Eq.
Bias Trap
P.B. Cal.
P.B. Dolby NR
Off
B
C
Dolby NR
Test Point
(90mV)
Tape
Source
Monitor
Line Amp.
400Hz
Off
15KHz
Tone
Meter Amp.
Level Meter
Power Mute
Output Volume
Monitor
Tape
Source
Mute
Mute
Power Mute
Line Output
(1V, 0dB)
Headphone Amp.
Headphone Output
(45mW, 0dB)
C
Off
B
Dolby NR
Source
Tape
Monitor
Balance Volume
Rec. Level Volume
Line Input
(50mV)
MPX Filter
Out
MPX
In
Rec. Dolby NR
Off
B
C
400Hz
Off
15KHz
Tone
Rch
Tone Osc.
400Hz
Off
15KHz
400Hz
Off
15KHz
Tone
Rec. Cal.
ZX
SX
EX
Tape
Rec. Amp.
70μs
120μs
Eq.
Tape
Monitor
Source
Cue
Record Head
EX
SX
ZX
Tape
Bias Osc.
f=105KHz
Erase Head
Record
Record Mute

Fig. 12.1

12.2. Mechanism Control Section

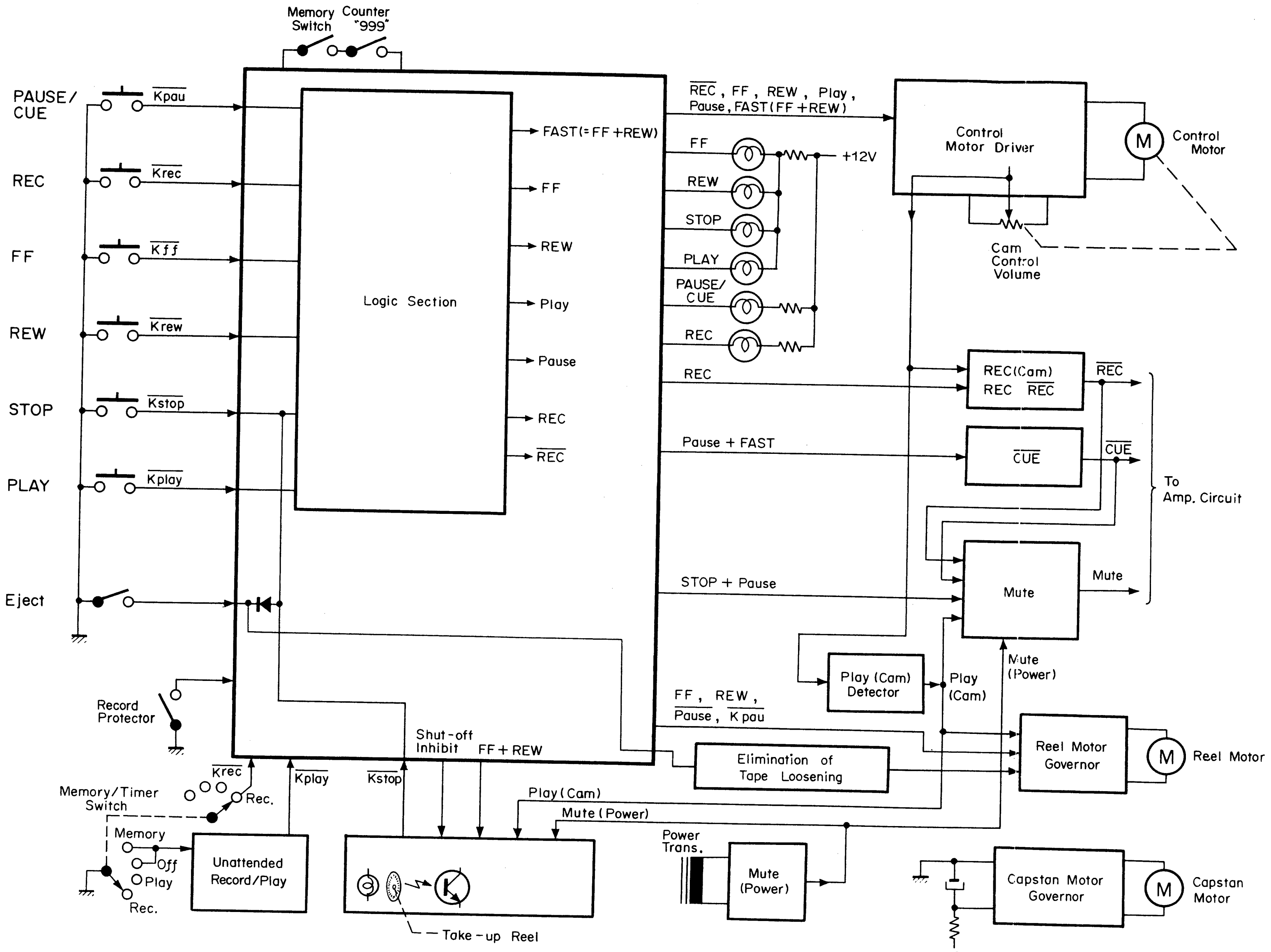

Memory Switch
Counter "999"
PAUSE/ CUE
Kpau
REC
Krec
FF
Kff
REW
Krew
STOP
Kstop
PLAY
Kplay
Eject
Logic Section
FAST(=FF+REW)
FF
REW
Play
Pause
REC
REC
REC, FF, REW, Play, Pause, FAST(FF+REW)
FF
REW
STOP
PLAY
PAUSE/ CUE
REC
+12V
Control Motor Driver
Control Motor
M
Cam Control Volume
REC
REC(Cam)
REC REC
REC
Pause + FAST
CUE
CUE
To Amp. Circuit
STOP + Pause
Mute
Mute
Play (Cam) Detector
Play (Cam)
Mute (Power)
FF, REW, Pause, Kpau
Reel Motor Governor
Reel Motor
Elimination of Tape Loosening
Record Protector
Shut-off Inhibit
FF+REW
Krec
Kplay
Kstop
Memory/Timer Switch
Rec.
Memory
Off
Play
Rec.
Unattended Record/Play
Play (Cam)
Mute (Power)
Take-up Reel
Power Trans.
Mute (Power)
Capstan Motor Governor
Capstan Motor
-12V

Fig. 12.2

13. SCHEMATIC DIAGRAMS

13.1. Attention to Servicemen

(1) Parts Replacement

Following parts shall be replaced with the specified ones. Refer to the parts list.

(a) Power Supply Circuit
  Power Cord
  Power Transformer: T1
  Power Switch: SW1

(b) Mains P.C.B. Ass'y
  Spark Killer
  Fuse: T200mA (220V Class 2, UK & Australia)

(c) Logic P.C.B. Ass'y
  Fuse: T1A – 2 pcs. (220V Class 2, UK & Australia)
  Regulator ICs: IC406, 407
  Diode Bridge: D401
  Power Transistors: Q419, 420, 431, 432
  Fail Safe Type Resistors: R407, 408, 473, 523

(d) Control Switch P.C.B. Ass'y
  Fail Safe Type Resistors: R605, 606, 607
  Lamps: PL601-606

(e) Lamp P.C.B. Ass'y
  Lamps: PL001-003

(f) Shut-off P.C.B. Ass'y
  Fail Safe Type Resistor: R605
  Lamp: PL407

(g) Indicator P.C.B. Ass'y
  Power Transistor: Q901
  Fail Safe Type Resistor: R901

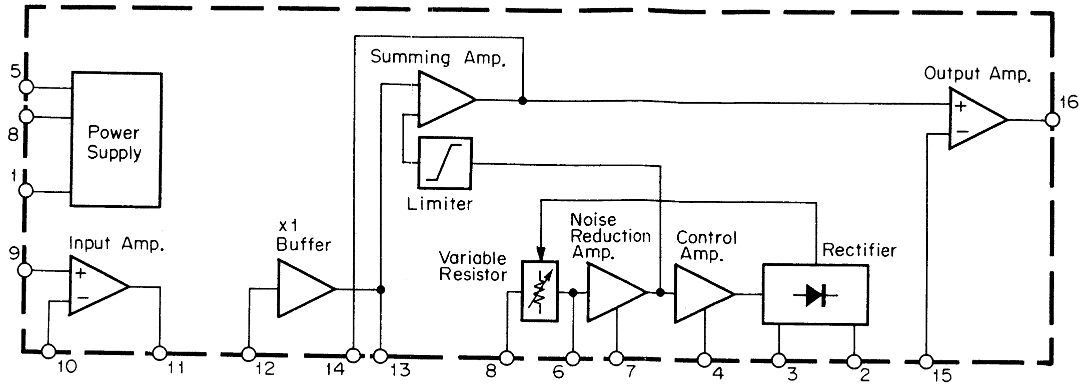
(h) Main P.C.B. Ass'y
  1) Serial No.: A12101501 –
    Power Transistors: Q109, 110, 209, 210, 306, 308
    Fail Safe Type Resistors: R149, 249, 313, 314, 315, 316, 319, 320, 326, 327, 328, 329, 334, 335, 336, 337, 338, 339, 340, 341, 342, 351

  2) Serial Nos.: A12101001 – A12101500
    Power Transistors: Q109, 110, 209, 210, 306, 308
    Fail Safe Type Resistors: R149, 249, 313, 314, 315, 316, 319, 320, 326, 327, 328, 329, 335, 336, 337, 338, 339, 340, 341, 342, 346

(2) Insulation Check

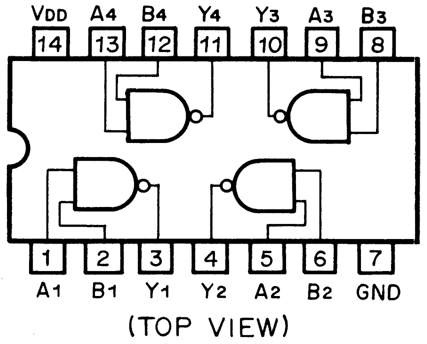
Before returning the repaired N-582Z to a customer, check to insure that the exposed part is accurately insulated from the AC line by measuring the leakage current or the insulation resistance between them.

13.2. IC Block Diagrams



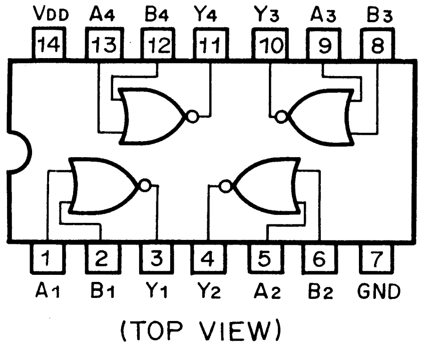
Summing Amp.
Output Amp.
Power Supply
Limiter
Input Amp.
x1 Buffer
Noise Reduction Amp.
Control Amp.
Rectifier
Variable Resistor
5
8
8
1
9
16
10
11
12
14
13
8
6
7
4
3
2
15

Fig. 13.1 Dolby NR IC μA7300PC



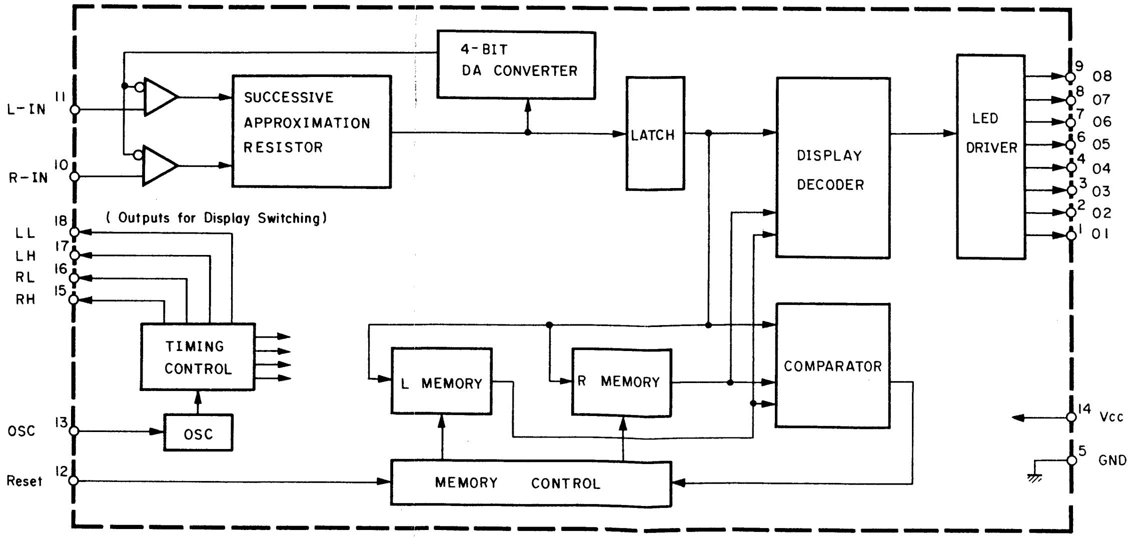
VDD A4 B4 Y4 Y3 A3 B3
14 13 12 11 10 9 8
1 2 3 4 5 6 7
A1 B1 Y1 Y2 A2 B2 GND
(TOP VIEW)

Fig. 13.2 NAND Gate C-MOS IC μPD4011BC



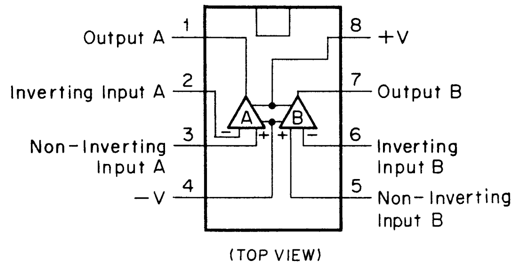
VDD A4 B4 Y4 Y3 A3 B3
14 13 12 11 10 9 8
1 2 3 4 5 6 7
A1 B1 Y1 Y2 A2 B2 GND
(TOP VIEW)

Fig. 13.3 NOR Gate C-MOS IC μPD4001BC



4-BIT DA CONVERTER
SUCCESSIVE APPROXIMATION RESISTOR
LATCH
DISPLAY DECODER
LED DRIVER
L-IN 11
R-IN 10
(Outputs for Display Switching)
LL 18
LH 17
RL 16
RH 15
TIMING CONTROL
OSC 13
OSC
Reset 12
L MEMORY
R MEMORY
COMPARATOR
MEMORY CONTROL
9 O8
8 O7
7 O6
6 O5
4 O4
3 O3
2 O2
1 O1
14 Vcc
5 GND

Fig. 13.4 Level Meter Control IC MSL9350RS



Output A 1
Inverting Input A 2
Non-Inverting Input A 3
–V 4
8 +V
7 Output B
6 Inverting Input B
5 Non-Inverting Input B
A
B
(TOP VIEW)

Fig. 13.5 Operational Amp. IC 4558, 4560, 4556

13.3. Amplifier Section

Switch	Chart
Description	Schematic Ref. Number
Monitor	SW301
Dolby NR	SW302
Tone	SW303
Eq.	SW304
Tape	SW305
Timer	SW306
MPX	SW307

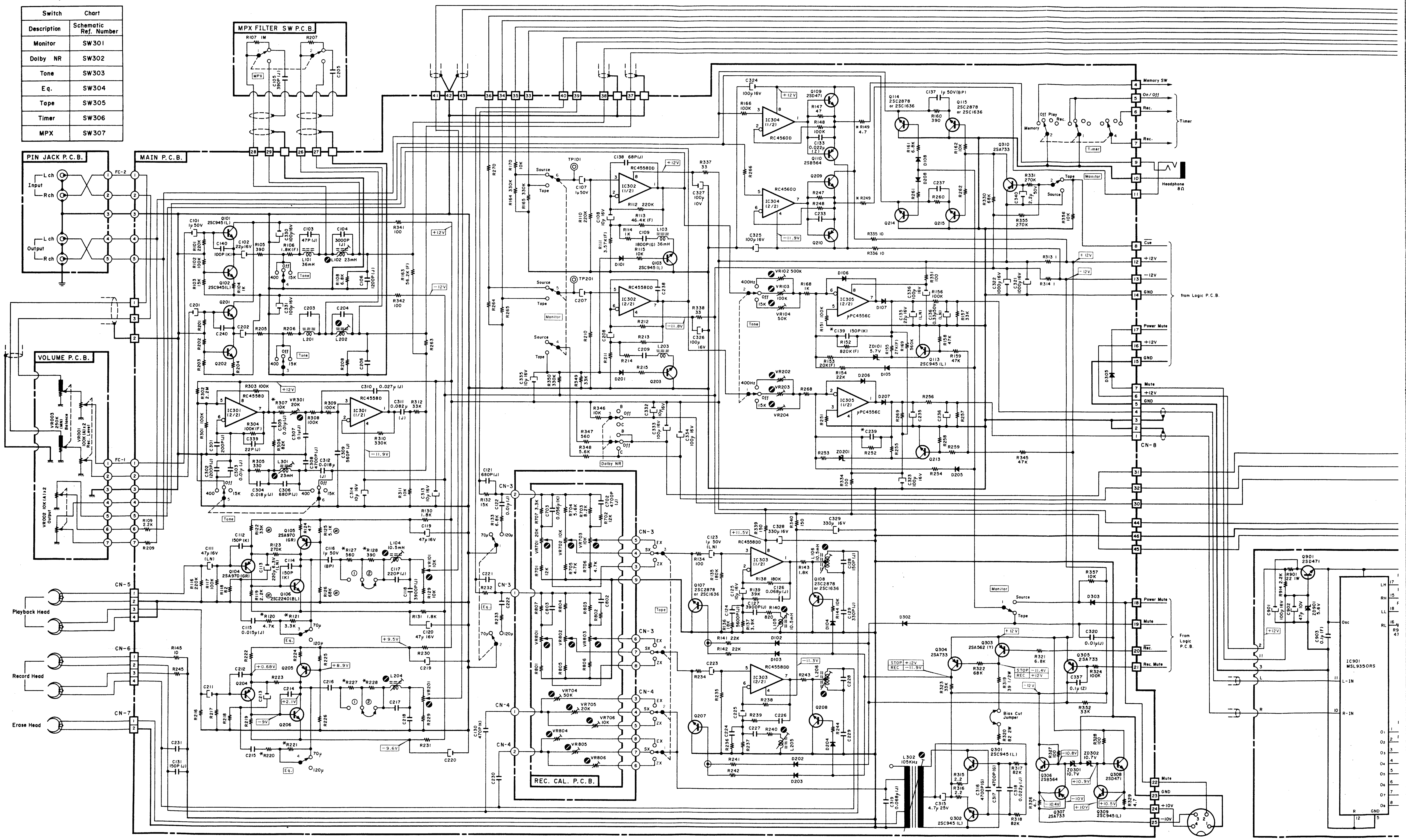

MPX FILTER SW P.C.B.
PIN JACK P.C.B.
MAIN P.C.B.
VOLUME P.C.B.
REC. CAL. P.C.B.
Input
Output
L ch
R ch
Playback Head
Record Head
Erase Head
Memory SW
On/Off
Rec.
Timer
Headphone 8Ω
Cue
+12V
−12V
GND
from Logic P.C.B.
Power Mute
Mute
From Logic P.C.B.
Rec Mute
CN-8
IC301 RC4558D
IC302 RC4558DD
IC303 RC4558DD
IC304 RC4560D
IC305 μPC4556C
IC901 MSL9350RS
L302 105KHz
Bias Cut Jumper
Monitor
Source
Tape
Tone
Eq.
Dolby NR
Off
400
15K
70μ
120μ
EX
SX
ZX

Fig. 13.6.1 Serial No.: A12102102 –

Notes.: 1. Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.
2. Resistor and capacitor marked with * show typical value.

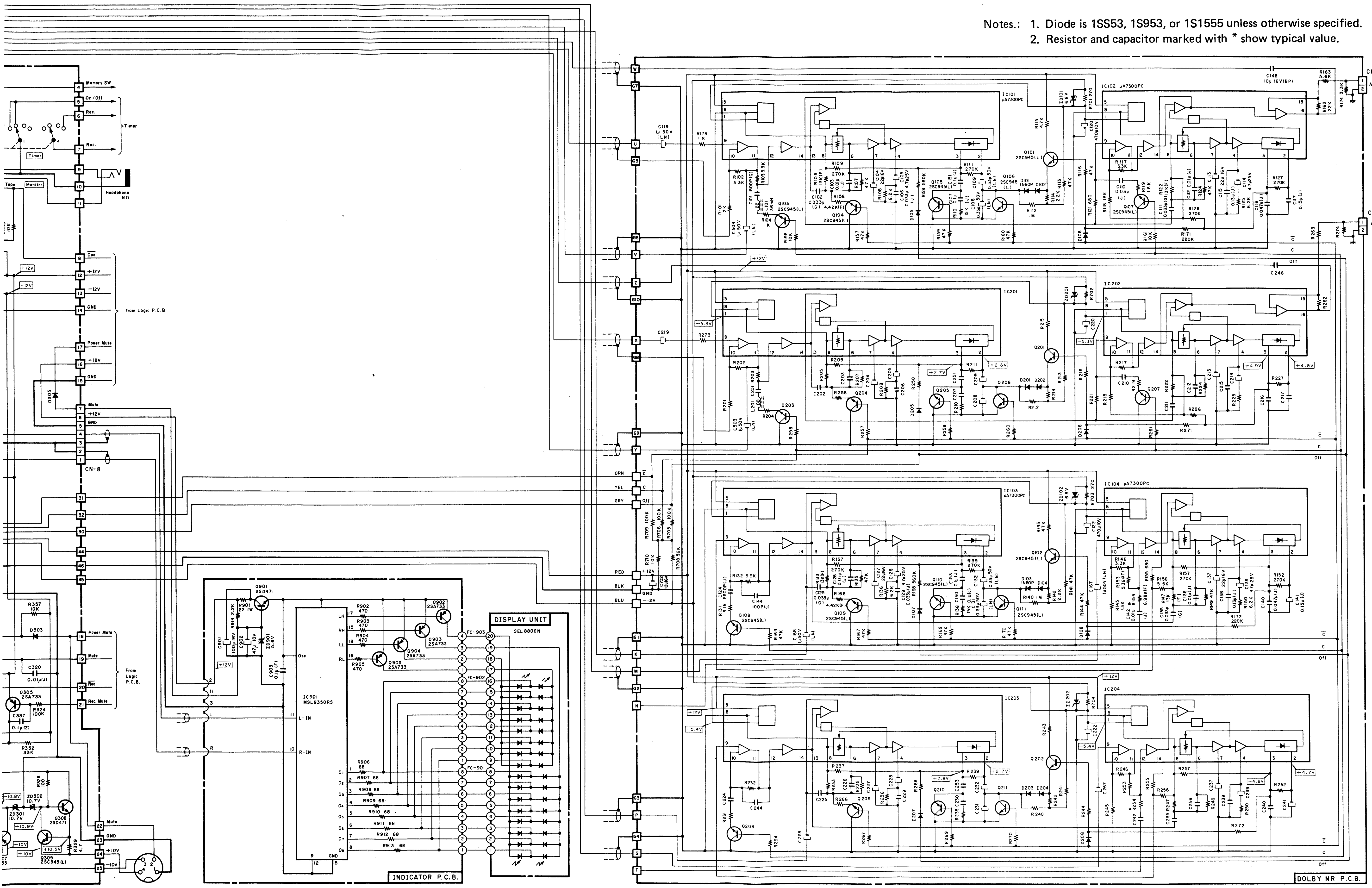
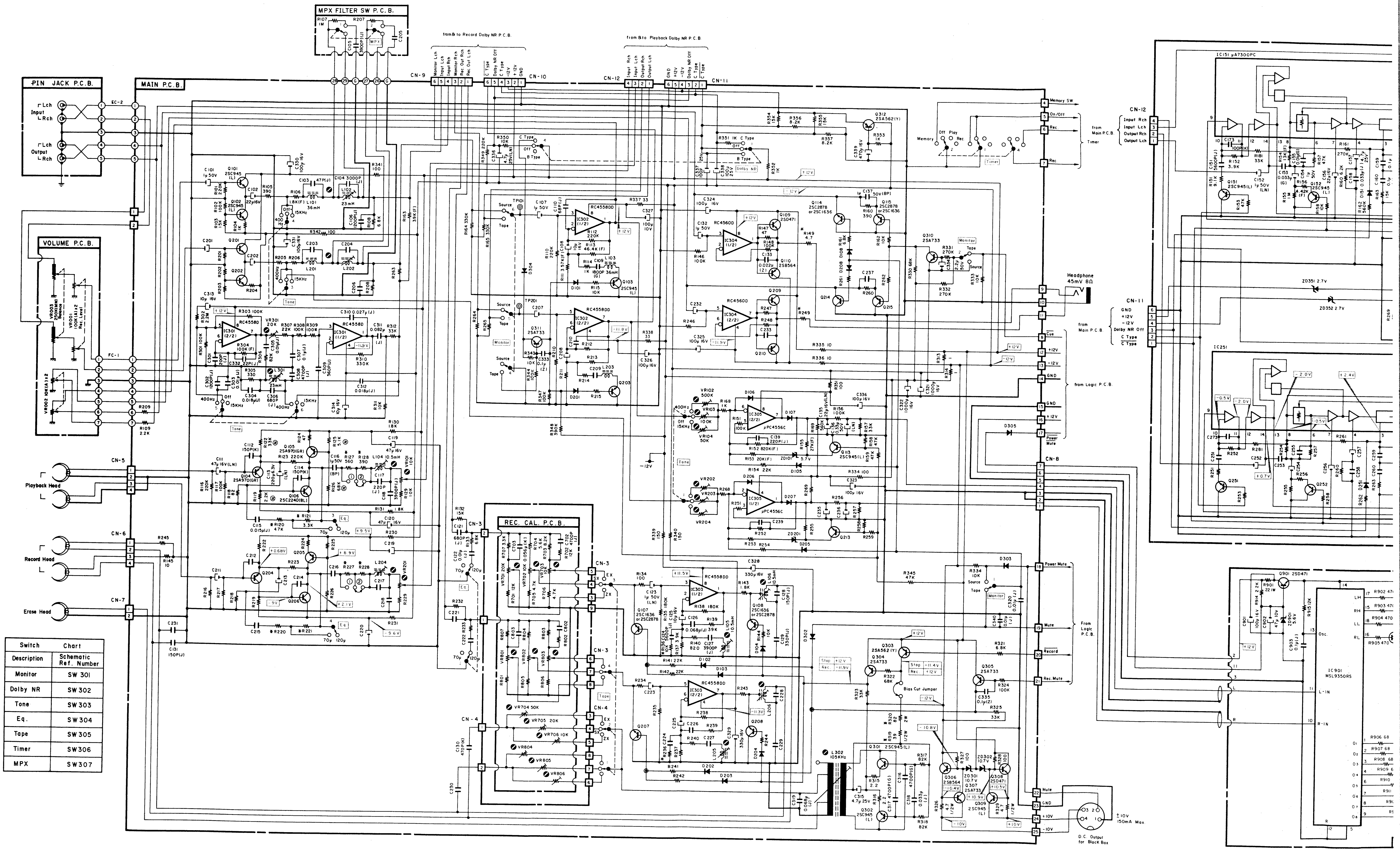
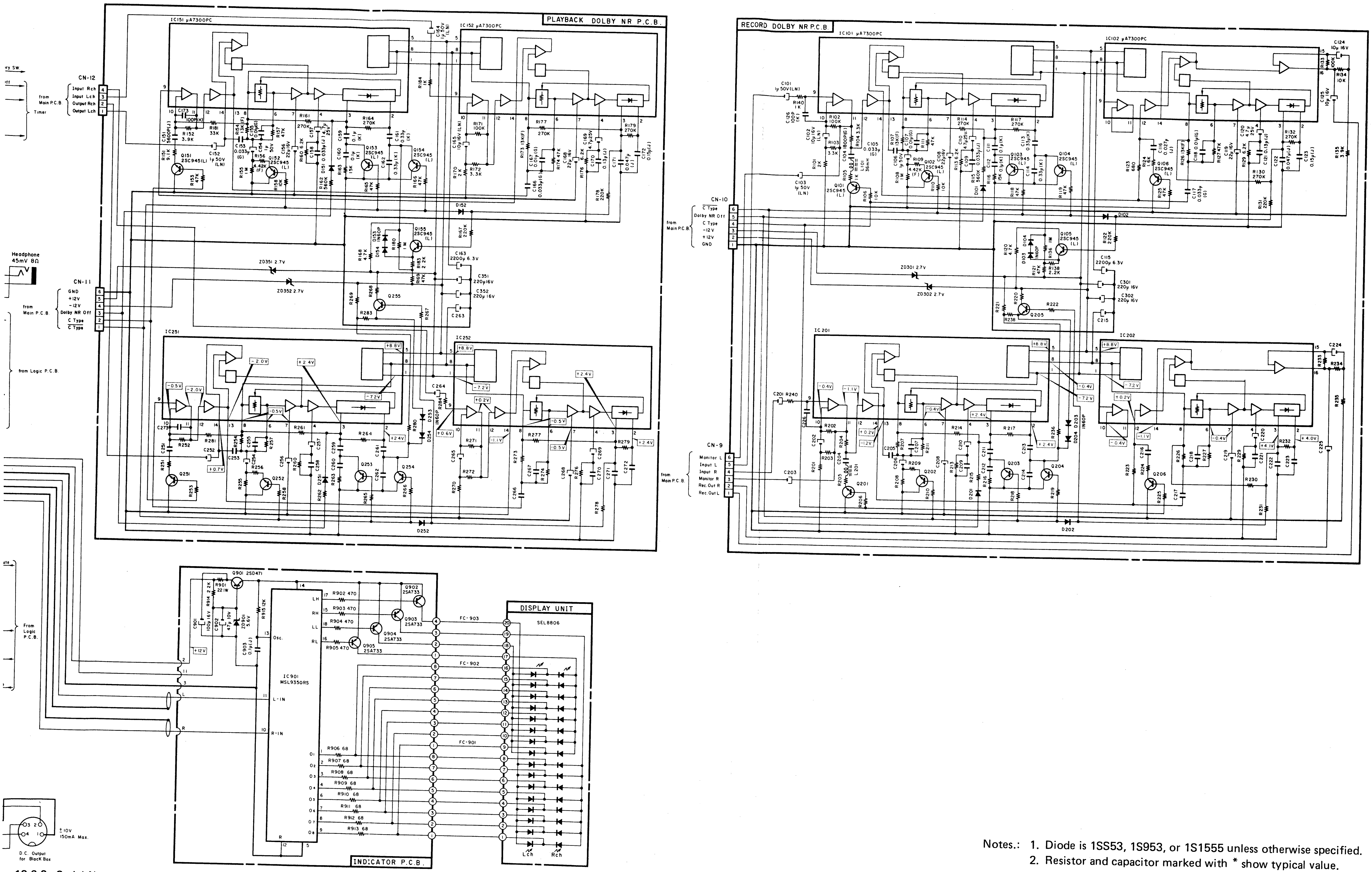

Memory SW
On/Off
Rec.
Timer
Tape
Monitor
Headphone 8Ω
Cue
+12V
-12V
GND
from Logic P.C.B.
Power Mute
Mute
CN-8
From Logic P.C.B.
Rec. Mute
Q305 2SA733
R324 100K
C320 0.01μ(J)
R352 33K
ZD302 10.7V
ZD301 10.7V
Q308 2SD471
Q309 2SC945(L)
+10V
-10V
Q901 2SD471
R901 22 1W
ZD901 5.6V
C901 100μ 16V
IC901 MSL9350RS
L-IN
R-IN
Osc
Q902 2SA733
Q903 2SA733
Q904 2SA733
Q905 2SA733
FC-903
FC-902
FC-901
DISPLAY UNIT
SEL 8806N
INDICATOR P.C.B.
ORN
YEL
GRY
RED
BLK
BLU
Off
IC101 μA7300PC
IC102 μA7300PC
IC201
IC202
IC103 μA7300PC
IC104 μA7300PC
IC203
IC204
Q101 2SC945(L)
Q102 2SC945(L)
Q201
Q202
C148 10μ 16V(BP)
R163 5.6K
R162 22K
R174 3.3K
CN-5
Auto Level (Lch)
to Auto Level VR
CN-6
Auto Level (Rch)
to Auto Level VR
C248
+12V
-5.3V
-5.4V
+2.7V
+2.6V
+4.9V
+4.8V
+2.8V
+4.7V
DOLBY NR P.C.B.

Fig. 13.6.1 Serial No.: A12102102 –


MPX FILTER SW P.C.B.
PIN JACK P.C.B.
MAIN P.C.B.
VOLUME P.C.B.
REC. CAL. P.C.B.
from B to Record Dolby NR P.C.B.
from B to Playback Dolby NR P.C.B.
CN-9
CN-10
CN-12
CN-11
CN-5
CN-6
CN-7
CN-3
CN-4
CN-8
Input Lch
Input Rch
Output Lch
Output Rch
VR003 Balance
VR001 Rec Level
VR002
Playback Head
Record Head
Erase Head
IC301 RC4558D
IC302 RC4558DD
IC303 RC4558DD
IC304 RC4560D
IC305 µPC4556C
L302 105KHz
Bias Cut Jumper
Headphone 45mV 8Ω
Memory SW
On/Off
Rec
Memory
Off
Play
Timer
Cue
Power Mute
Mute
Record
Rec. Mute
GND
+12V
-12V
+10V
-10V
from Main P.C.B.
from Logic P.C.B.
±10V 150mA Max
D.C. Output for Black Box
IC151 µA7300PC
IC251
IC901 MSL9350RS
Osc.
L-IN
R-IN
ZD351 2.7V
ZD352 2.7V

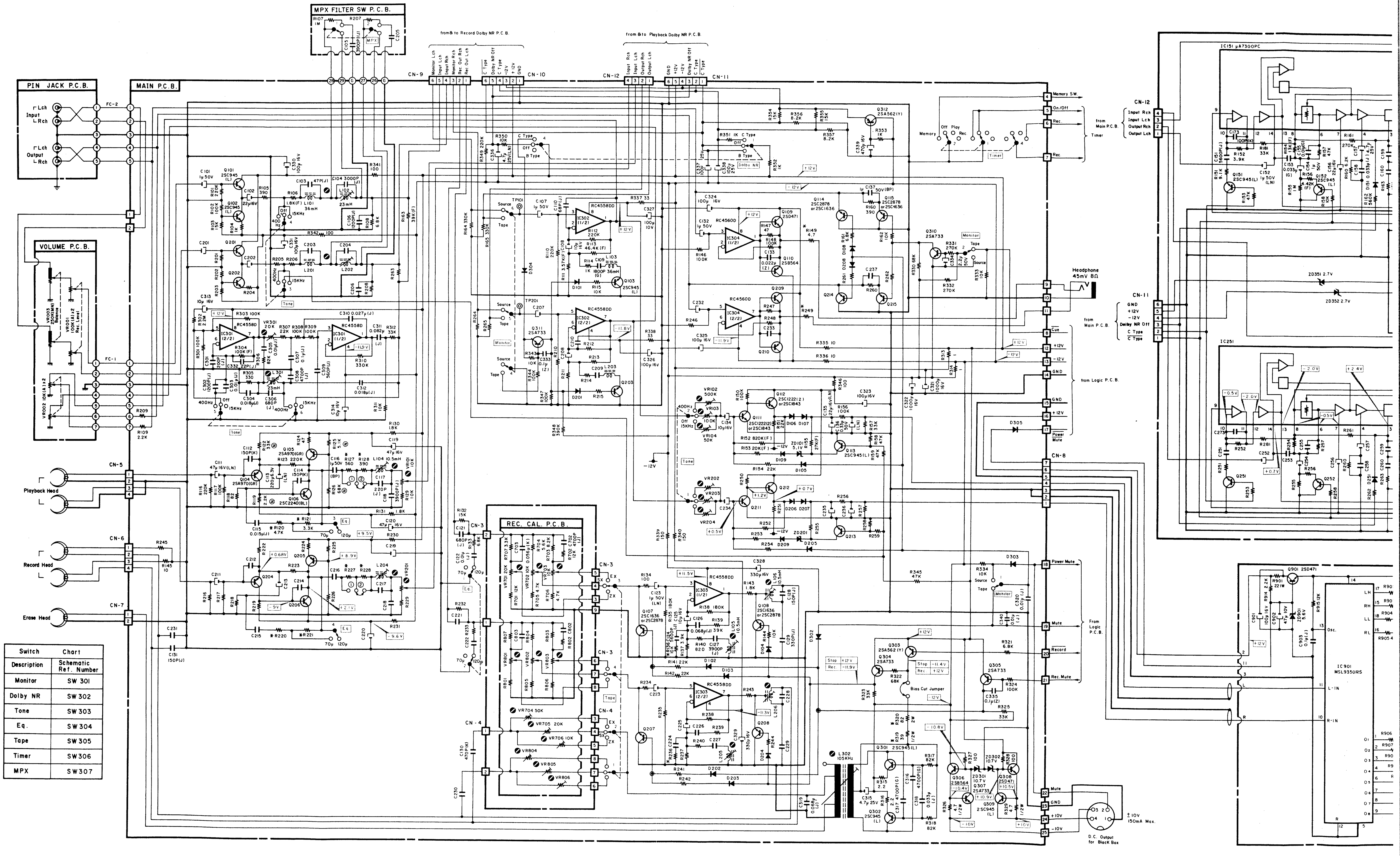
Switch	Chart
Description	Schematic Ref. Number
Monitor	SW 301
Dolby NR	SW 302
Tone	SW 303
Eq.	SW 304
Tape	SW 305
Timer	SW 306
MPX	SW 307

Fig. 13.6.2 Serial Nos.: A12101501 – A12102101


PLAYBACK DOLBY NR P.C.B.
RECORD DOLBY NR P.C.B.
IC151 μA7300PC
IC152 μA7300PC
IC101 μA7300PC
IC102 μA7300PC
IC251
IC252
IC201
IC202
CN-12
Input Rch
Input Lch
Output Rch
Output Lch
from Main P.C.B.
Timer
CN-11
GND
+12V
-12V
Dolby NR Off
C Type
from Main P.C.B.
from Logic P.C.B.
Headphone 45mV 8Ω
CN-10
C Type
Dolby NR Off
-12V
+12V
GND
CN-9
Monitor L
Input L
Input R
Monitor R
Rec.Out R
Rec.Out L
ZD351 2.7V
ZD352 2.7V
ZD301 2.7V
ZD302 2.7V
Q901 2SD471
Q902 2SA733
Q903 2SA733
Q904 2SA733
Q905 2SA733
IC901 MSL9350RS
Osc.
L-IN
R-IN
FC-903
FC-902
FC-901
DISPLAY UNIT
SEL8806
Lch
Rch
INDICATOR P.C.B.
From Logic P.C.B.
D.C. Output for Black Box
±10V 150mA Max.

g. 13.6.2 Serial Nos.: A12101501 – A12102101

Notes.:
1. Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.
2. Resistor and capacitor marked with * show typical value.


MPX FILTER SW P.C.B.
PIN JACK P.C.B.
MAIN P.C.B.
VOLUME P.C.B.
REC. CAL. P.C.B.
from B to Record Dolby NR P.C.B.
from B to Playback Dolby NR P.C.B.
CN-9
CN-10
CN-12
CN-11
CN-5
CN-6
CN-7
CN-3
CN-4
CN-8
FC-2
FC-1
Input
Output
Playback Head
Record Head
Erase Head
Headphone 45mV 8Ω
Memory SW
On/Off
Rec
Timer
from Main P.C.B.
from Logic P.C.B.
Power Mute
Mute
Record
Rec. Mute
GND
+12V
-12V
+10V
-10V
D.C. Output for Black Box
±10V 150mA Max.
IC151 μA7300PC
IC251
IC901 MSL9350RS
RC4558DD
RC4560D
Bias Cut Jumper
L302 105KHz

Switch	Chart
Description	Schematic Ref. Number
Monitor	SW 301
Dolby NR	SW 302
Tone	SW 303
Eq.	SW 304
Tape	SW 305
Timer	SW 306
MPX	SW 307

Fig. 13.6.3 Serial Nos.: A12101001 – A12101500

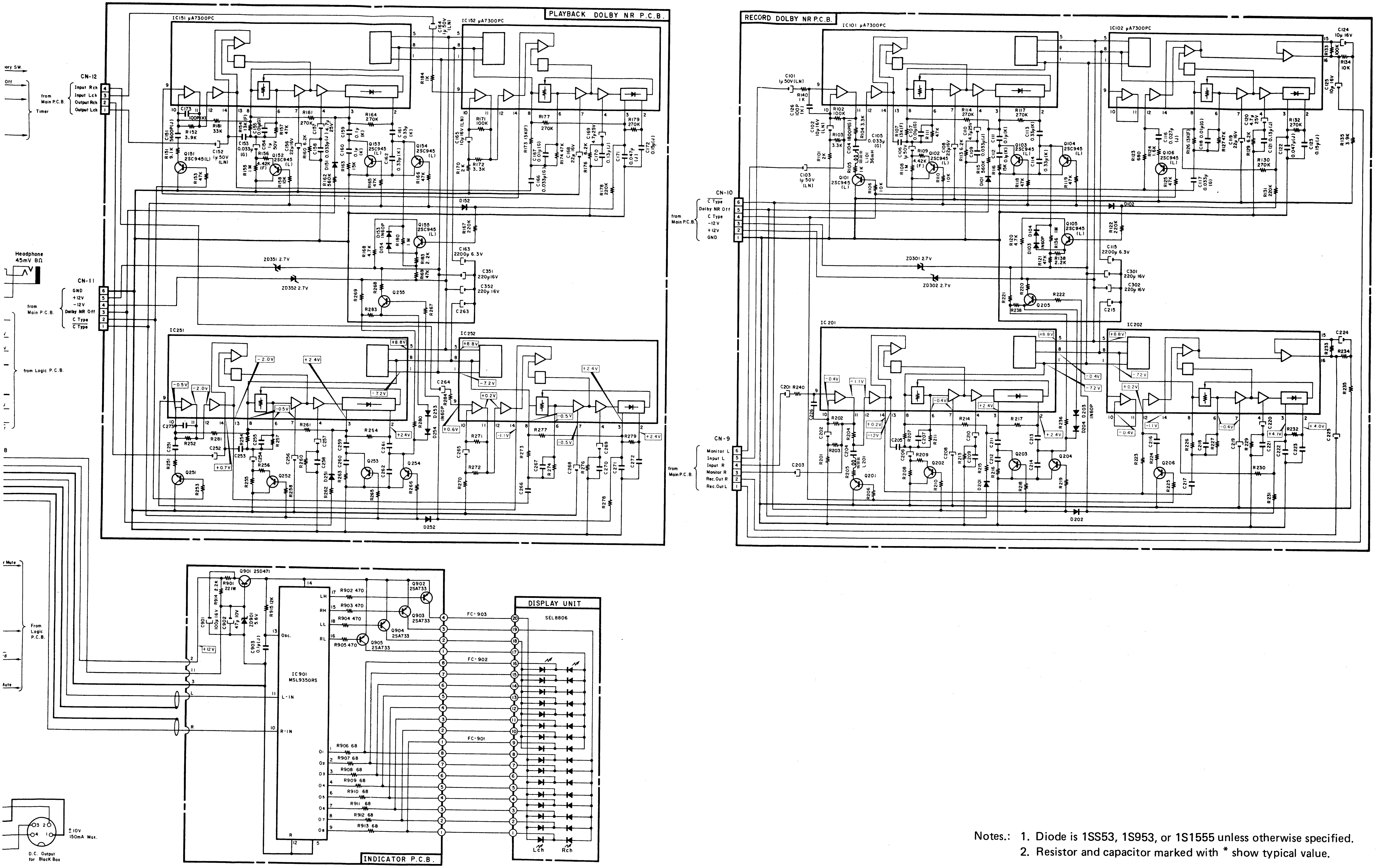
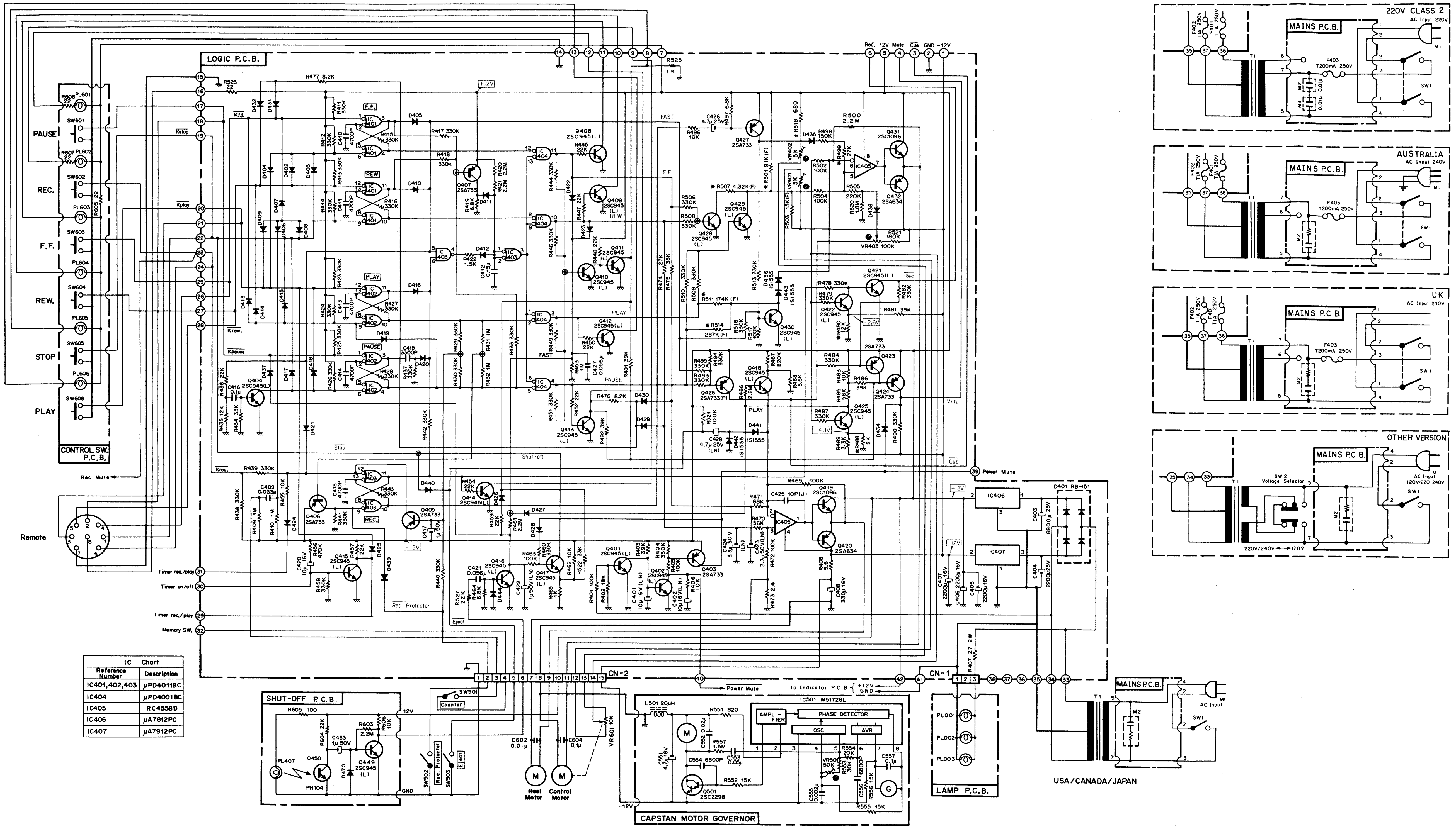

PLAYBACK DOLBY NR P.C.B.
RECORD DOLBY NR P.C.B.
INDICATOR P.C.B.
DISPLAY UNIT
SEL8806
IC151 μA7300PC
IC152 μA7300PC
IC101 μA7300PC
IC102 μA7300PC
IC251
IC252
IC201
IC202
IC901 MSL9350RS
CN-12
Input Rch
Input Lch
Output Rch
Output Lch
from Main P.C.B.
Timer
CN-11
GND
+12V
-12V
Dolby NR Off
C Type
C Type
from Main P.C.B.
from Logic P.C.B.
Headphone 45mV 8Ω
CN-10
C Type
Dolby NR Off
C Type
-12V
+12V
GND
from Main P.C.B.
CN-9
Monitor L
Input L
Input R
Monitor R
Rec.Out R
Rec.Out L
from Main P.C.B.
ZD351 2.7V
ZD352 2.7V
ZD301 2.7V
ZD302 2.7V
Q901 2SD471
Q902 2SA733
Q903 2SA733
Q904 2SA733
Q905 2SA733
FC-903
FC-902
FC-901
From Logic P.C.B.
D.C. Output for Black Box
±10V 150mA Max.
Lch
Rch

Fig. 13.6.3 Serial Nos.: A12101001 – A12101500

Notes.:
1. Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.
2. Resistor and capacitor marked with * show typical value.

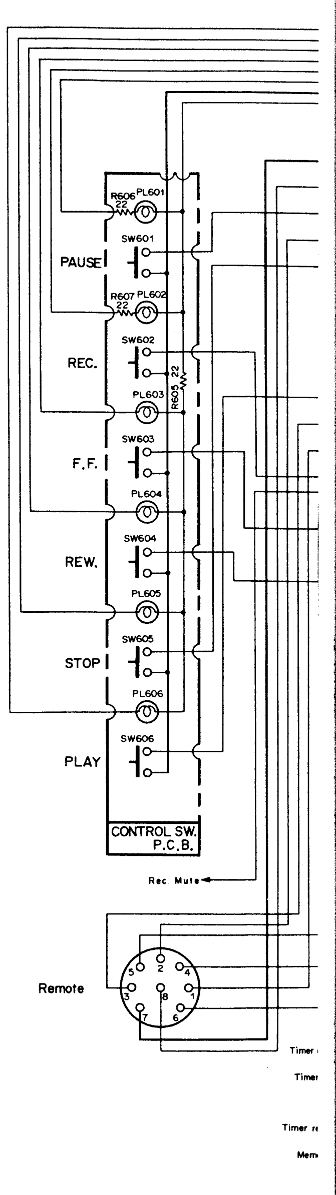
13.4. Mechanism Control Section


LOGIC P.C.B.
CONTROL SW. P.C.B.
PAUSE
REC.
F.F.
REW.
STOP
PLAY
Remote
Rec. Mute
Timer rec./play
Timer on/off
Timer rec./play
Memory SW.
Power Mute
Rec. 12V Mute Cue GND -12V
SHUT-OFF P.C.B.
Counter
Rec. Protector
Eject
Reel Motor
Control Motor
CN-2
CN-1
to Indicator P.C.B. +12V GND
CAPSTAN MOTOR GOVERNOR
IC501 M51728L
AMPLI-FIER
PHASE DETECTOR
OSC
AVR
LAMP P.C.B.
MAINS P.C.B.
AC Input
USA/CANADA/JAPAN
220V CLASS 2
AUSTRALIA
UK
OTHER VERSION
Voltage Selector
220V/240V ↔ 120V
D401 RB-151
IC406
IC407
FAST
PLAY
PAUSE
Shut-off
Stop
Cue
Mute
Rec Protector
Eject

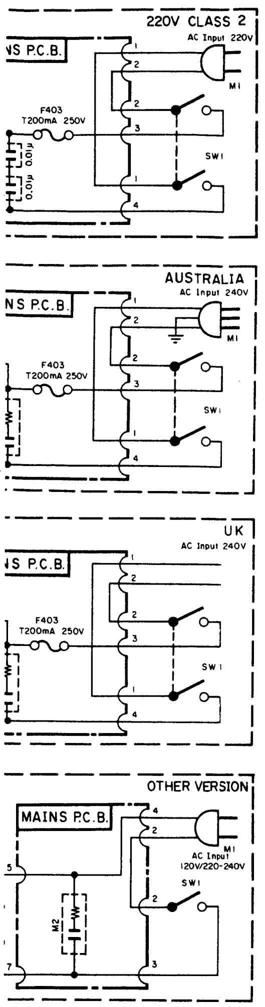
IC Chart	
Reference Number	Description
IC401,402,403	µPD4011BC
IC404	µPD4001BC
IC405	RC4558D
IC406	µA7812PC
IC407	µA7912PC

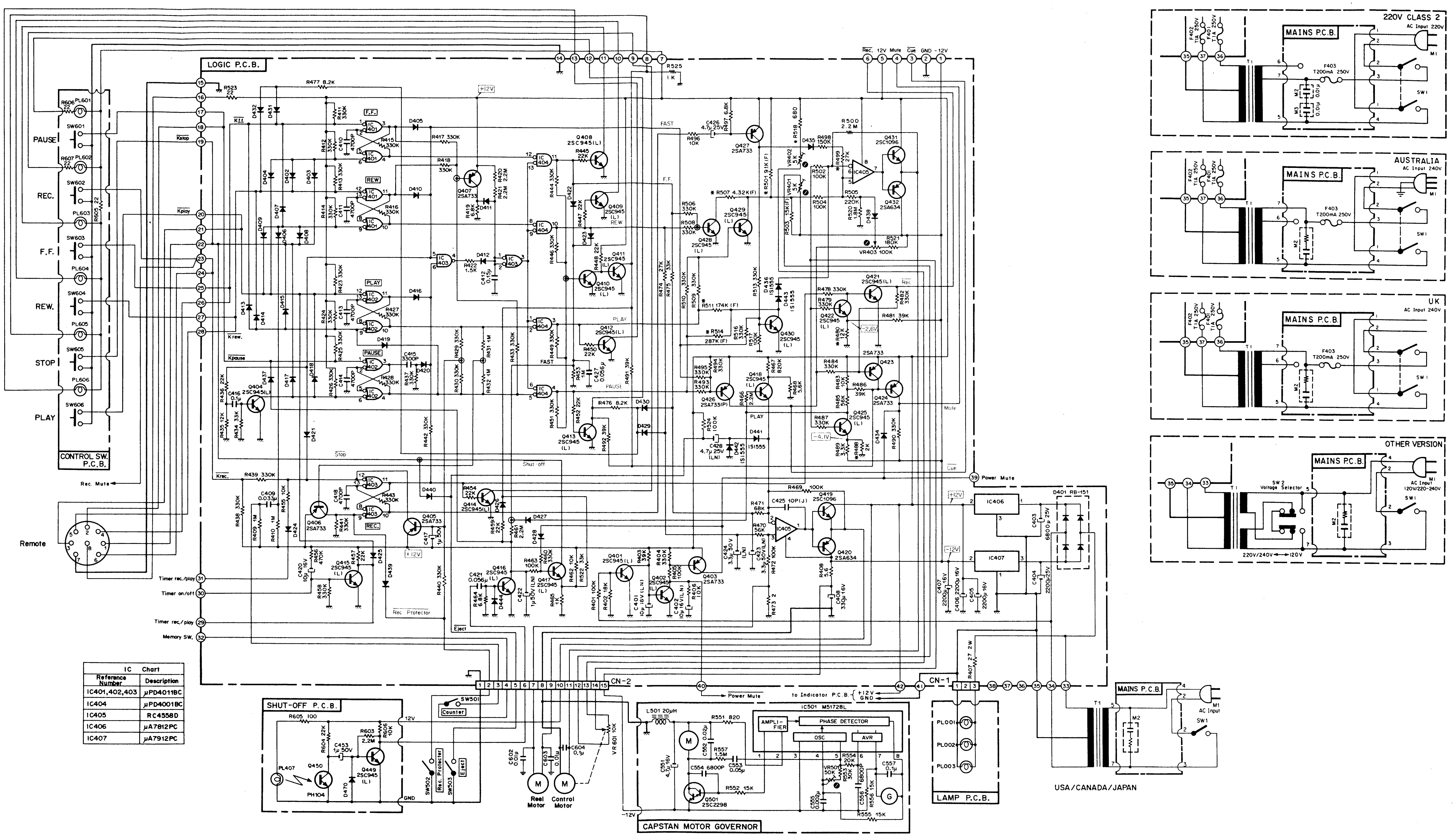
Fig. 13.7.1 Serial No.: A12102903 –

Notes.:
1. Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.
2. Resistor and capacitor marked with * show typical value.


PAUSE
REC.
F.F.
REW.
STOP
PLAY
CONTROL SW. P.C.B.
Rec. Mute
Remote

IC Chart	
Reference Number	Descriptio
IC401,402,403	µPD4011
IC404	µPD4001
IC405	RC4558
IC406	µA7812P
IC407	µA7912P


220V CLASS 2
NS P.C.B.
AUSTRALIA
UK
OTHER VERSION
MAINS P.C.B.
F403 T200mA 250V
SW1
M1


LOGIC P.C.B.
CONTROL SW. P.C.B.
PAUSE
REC.
F.F.
REW.
STOP
PLAY
Remote
Rec. Mute
Timer rec./play
Timer on/off
Timer rec./play
Memory SW.
SHUT-OFF P.C.B.
Counter
Rec. Protector
Eject
Reel Motor
Control Motor
CN-2
CN-1
Power Mute
to Indicator P.C.B.
IC501 M51728L
AMPLI-FIER
PHASE DETECTOR
OSC
AVR
CAPSTAN MOTOR GOVERNOR
LAMP P.C.B.
MAINS P.C.B.
USA/CANADA/JAPAN
220V CLASS 2
AUSTRALIA
UK
OTHER VERSION
220V/240V←→120V
IC406
IC407
D401 RB-151

IC Chart	
Reference Number	Description
IC401,402,403	μPD4011BC
IC404	μPD4001BC
IC405	RC4558D
IC406	μA7812PC
IC407	μA7912PC

Fig. 13.7.2 Serial Nos.: A12101001 – A12102902

Notes.: 1. Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.
2. Resistor and capacitor marked with * show typical value.

specified.
value.

14. SPECIFICATIONS

Power Source	100, 120, 120/220-240, 220 or 240 V AC; 50/60 Hz (According to country of sale)
Power Consumption	30 W max.
Tape Speed	1-7/8 ips (4.8 cm/sec) ±0.5%
Wow and Flutter	Less than 0.1% WTD Peak, 0.05% WTD rms
Frequency Response	20–20,000 Hz ±3 dB (–20 dB Rec. Level)
Signal to Noise Ratio (Dolby NR In, 70 µs)	**C-Type NR on** (70 µs, ZX Tape) Better than 72 dB at 400 Hz, 3% THD, IHF A-wtd rms **B-Type NR on** (70 µs, ZX Tape) Better than 66 dB at 400 Hz, 3% THD, IHF A-wtd rms
Total Harmonic Distortion	Less than 0.8% at 400 Hz, 0 dB (ZX Tape) Less than 1.0% at 400 Hz, 0 dB (SX, EXII Tapes)
Erasure	Better than 60 dB below saturation level at 1 kHz
Separation	Better than 37 dB at 1 kHz, 0 dB
Crosstalk	Better than 60 dB at 1 kHz, 0 dB
Bias Frequency	105 kHz
Input	50 mV, 50 k ohms
Output Level	1 V (400 Hz, 0 dB, Output Level at max.) 2.2 k ohms
Headphone	45 mW
DC Output Jack	±10 V 125 mA max.
Dimensions	500 (W) x 130 (H) x 350 (D) mm 19-11/16 (W) x 5-1/8 (H) x 13-25/32 (D) inches
Approximate Weight	8.3 kg, 18 lb. 5 oz

- Specifications and appearance design are subject to change for further improvement without notice.
- Dolby NR under license from Dolby Laboratories Licensing Corporation.
- The word "DOLBY" and the Double-D-Symbol are trademarks of Dolby Laboratories Licensing Corporation.